

RECREATIONAL ACTIVITY PREFERENCES
REASONS FOR PARTICIPATING
AND THE SATISFACTION OF NEEDS
EXECUTIVE SUMMARY



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RECREATION AND PARKS



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Analysis of Data from the
Public Opinion Survey on Recreation

Prepared by
Edgar L. Jackson, Ph.D.
Western Social and Geographic Surveys, Ltd.

Prepared for
Alberta Recreation and Parks
Recreation Development Division
Planning Support Branch

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This Executive Summary is condensed from an original 177 page report prepared by Dr. E. L. Jackson of Western Social and Geographic Surveys, Ltd. for Alberta Recreation and Parks, Recreation Development Division, Planning Support Branch.

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A. INTRODUCTION

This Executive Summary presents a condensed description of the main findings and implications of a comprehensive examination among a sample of Albertans of:

- i) recreational activity preferences,
- ii) reasons for participation, and
- iii) needs satisfied by participation.

The data upon which the conclusions are based were derived from the 1981 Public Opinion Survey on Recreation.

The data provided answers to the following questions:

- o what are the main reasons why people participate in various types of recreational activities?
- o what are the main needs satisfied by participation in a favourite recreational activity?
- o which types of recreational activity represent the most appropriate outlets for the fulfilment of reasons for participating and for the satisfaction of needs?
- o to what extent do various types of recreational activity appeal to sub-sections of the population defined according to socio-economic characteristics?

Reference should be made to the complete report by E. Jackson for statistical tables, detailed information on methods of data treatment and analysis, and guides to the interpretation of data.

B. BACKGROUND

The Public Opinion Survey on Recreation was mailed to a sample of 4,700 randomly selected Albertans in February 1981. A response rate of 51.6% (2,425 individuals) was achieved.

Relatively simple methods of data analysis were employed. Where more sophisticated forms of multi-variate analysis were utilized as a check on basic two-variable relationships, the original results were generally confirmed. The conclusions can thus be accepted as a reasonably reliable interpretation of Albertans' recreational activity preferences and associated factors.

C. RECREATIONAL ACTIVITY PREFERENCES

1. Classification and Analysis of Preferences

The analysis of recreational activity preferences was conducted in two stages. In the first stage, the results were based on an initial five-part classification developed by Alberta Recreation and Parks, primarily for the purpose of administering the questionnaire. In the second stage, an alternative classification of eleven groups was used because of several serious limitations of the original classification from an interpretive (though not necessarily administrative) standpoint. All results referred to here are based on the revised classification.

2. Specific Activity Preferences

Respondents expressing a preference for specific activities ranged from a high of 191 in the case of camping to a low of one response for ballet and stamp collecting. Only four additional activities were mentioned by more than one hundred respondents: golf (115), downhill skiing (111), fishing (108), and hockey (101). Only a total of 20 out of approximately 90 activities were listed as the "favourite" by thirty or more respondents. For this and other reasons, the data were examined on the basis of the classification referred to above.

3. Grouped Activity Preferences

Recreational activity preferences of respondents in rank order were as follows: exercise-oriented activities (preferred by 21.1%), team sports (12.1%), camping (7.9%), hunting and fishing (7.3%), passive indoor activities (5.5%), non-self-propelled and/or mechanized outdoor recreational activities (5.2%), creative-cultural activities (4.8%), golf (4.7%), social activities (4.7%), downhill skiing (4.6%), and self-propelled and/or non mechanized outdoor recreational activities (4.0%).

D. REASONS FOR PARTICIPATING IN THE FAVOURITE ACTIVITY, AND THE NEEDS WHICH ARE SATISFIED BY PARTICIPATION

1. Rank-order of Reasons and Needs

On the basis of the proportion of the total sample rating them as "important", the following was the rank-order of reasons for

participating in the favourite recreational activity: pleasure (82.0%), relaxation (64.4%), health and exercise (64.0%), an alternative to work (59.0%), pleasant surroundings (56.8%), socialization with others (46.7%), being with the family (46.6%), improving skills and knowledge (45.3%), challenge (41.6%), excitement (41.0%), commitment (18.8%), competition (15.0%), "because I am good at it" (14.6%), community contribution (14.5%), solitude (14.2%), and recognition (6.9%).

The following was the rank order of needs satisfied "often" by participating in a favorite recreational activity: relaxation (71.7%), staying healthy (66.4%), pleasant places (66.5%), sense of accomplishment (52.4%), physical challenge (51.6%), socializing with others (49.8%), increasing knowledge (42.1%), and trying new things (40.1%).

2. Recreational Outlets for Reasons and Needs

As far as the main reasons for participating are concerned, the following types of recreational activity are stated most frequently as the most appropriate outlets:

- o pleasure: all types
- o relaxation: camping, golf, creative-cultural activities, social activities
- o health and exercise: exercise-oriented activities, team sports
- o alternative to work: camping
- o pleasant surroundings: hunting and fishing, self-propelled activities
- o socialization: social activities, team sports, golf

- o being with the family: camping
- o improving skills and knowledge: creative-cultural activities
- o challenge, excitement: team sports, downhill skiing
- o competition: team sports
- o solitude: passive activities, hunting and fishing,
self-propelled activities

The following activities are stated most frequently as the most appropriate outlets for the satisfaction of needs:

- o relaxation: hunting and fishing, camping
- o staying healthy, physical challenge: exercise-oriented activities, self-propelled activities, team sports, downhill skiing
- o pleasant places: downhill skiing, camping, self-propelled activities
- o socializing with others: team sports, golf, social activities
- o sense of accomplishment: creative-cultural activities
- o increasing knowledge: hunting and fishing, creative-cultural activities, passive activities
- o trying new things: creative-cultural activities, camping

3. Consistency between Reasons and Needs

In general, the proportion of each sub-group of respondents, defined according to recreational activity preferences, who reported a specific need being satisfied "often", was comparable to the proportion who rated the corresponding reason as "important". This indicates that,

for the most part, the recreational activities which the majority of people identify as their "favourite" adequately satisfy the reasons which motivate that choice. In several cases, a need was reported as satisfied more frequently than the corresponding reason was considered important, whereas examples of the failure to fulfil reasons for participating were rare.

E. SOCIO-ECONOMIC VARIATIONS IN RECREATIONAL ACTIVITY PREFERENCES

Of the five socio-economic variables examined, age and sex were the most closely related to recreational activity preferences while income acted relatively poorly as a predictor of preference. Education and type of household occupied an intermediate position between these two extremes. Some highlights of the findings are as follows:

- o Age: Preferences for exercise-oriented activities, team sports, and downhill skiing declined with advancing age, while preferences for social and passive activities and golf increased with age. Preferences for extractive, self-propelled, and mechanized activities, and for camping were highest among the intermediate age groups; preferences for creative-cultural activities were not influenced by age.

- o Sex: Larger proportions of males than females preferred team sports, golf, and especially, extractive activities, while more females than males preferred creative-cultural, social, passive, and

exercise-oriented activities. Preferences for downhill skiing, camping, self-propelled, and mechanized activities did not differ between males and females.

o Education: Preferences for exercise-oriented, passive, and self-propelled activities, and downhill skiing increased in frequency with increasing education, while the opposite was true in the case of camping, extractive, and mechanized activities. No clear trends emerged according to education for the remaining classes of activity.

o Income: Differences between sub-groups of the sample defined according to income were small and few meaningful trends emerged, with the exceptions of golf and downhill skiing, for which preferences increased with increasing income, and creative-cultural activities, for which a decline in preference with income was apparent. Preferences for team sports and camping were strongest among the middle income groups.

o Type of Household: Preferences for creative-cultural activities and golf were more frequently expressed by couples with no children. Social and mechanized activities were most often preferred by respondents from single-parent families. These respondents also shared a high preference for exercise-oriented activities with respondents from households containing one or more unrelated adults, who were also more likely than others to prefer downhill skiing. Couples were more likely to prefer extractive activities and camping. The presence of children in the family also exerted a positive influence on the preference for camping.

For the most part, the rank-order of preference for recreational activities was maintained across socio-economic groups; the differences were in terms of the strength of preference.

Situational factors may override the influence of reasons for participating for three "special populations". These were respondents aged 65 and over, those with an income of \$10,000 or less, and respondents from single-parent families. The findings indicate the effects of barriers to participation among these groups, which should be addressed in recreation planning and management.

F. PROFILES OF RECREATIONAL ACTIVITY PREFERENCE GROUPS

o Creative-cultural activities: preferred by respondents who evaluated pleasure, relaxation, an alternative to work, the improvement of skills and knowledge, pleasant surroundings, commitment, egoism, and solitude as important. Needs satisfied included a sense of accomplishment, relaxation, pleasant places, trying new things, and increasing knowledge. Preferences for creative-cultural activities were more frequent among females than males, and among couples with no children, but were not influenced by age, education, or income.

o Social activities: preferred by respondents who evaluated pleasure, relaxation, an alternative to work, socialization, contribution to the community, and recognition as important. Needs satisfied included relaxation and socialization. Preferences for social activities increased among successively older age-groups, among females, among respondents with a high school education, and among single-parent families, but were not influenced by income.

o Passive activities: preferred by respondents who evaluated pleasure, relaxation, and solitude as important. Needs satisfied included relaxation and increasing knowledge. Preferences for passive activities were most frequently expressed among older age-groups, females, and the better-educated, but were not influenced by income or type of household.

o Exercise-oriented activities: ranked first in preference among the sample as a whole and among almost all sub-groups, but were more frequently preferred by respondents who evaluated health and exercise as important. Needs satisfied included staying healthy, physical challenge, and relaxation. Preferences for exercise-oriented activities declined with age, increased with education, and were more frequent among females, single-parent families, and households with unrelated adults, but were not influenced by income.

o Team sports: preferred by respondents who evaluated pleasure, health and exercise, socialization, an alternative to work, challenge, and excitement as important. Needs satisfied included staying healthy,

physical challenge, and socialization. Preferences for team sports declined with age, and were most frequently expressed by males and respondents with a high school education and a middle-level income, but were not influenced by the type of household.

- o Golf: preferred by respondents who evaluated pleasure, relaxation, health and exercise, pleasant surroundings, and socialization as important. Needs satisfied included pleasant places and socialization. Preferences for golf were more frequent among males, couples with no children, and those with intermediate levels of education, and they increased with age and income.

- o Downhill skiing: preferred by respondents who evaluated pleasure, health and exercise, pleasant surroundings, excitement, and challenge as important. Needs satisfied included staying healthy, physical challenge, pleasant places, and relaxation. Preferences for downhill skiing were approximately equal among males and females, and increased with both education and income, but declined sharply with age; they were also more frequent among respondents from households with one or more unrelated adults.

- o Hunting and fishing: preferred by respondents who evaluated pleasure, pleasant surroundings, relaxation, an alternative to work, and being with the family as important. Needs satisfied included relaxation, pleasant places, and increasing knowledge. Preferences for hunting and fishing were almost exclusively expressed by males, were more prevalent among the intermediate age-groups and couples regardless of the

presence of children in the family, declined with education, and were not influenced by income.

o Camping: preferred by respondents who evaluated pleasure, pleasant surroundings, relaxation, being with the family, and an alternative to work as important. Needs satisfied included relaxation, pleasant places, and increasing knowledge. Preferences for camping were not influenced by sex and declined with education, but were more frequent among respondents from intermediate age and income groups, and among couples, especially those with children.

o Self-propelled and/or non-mechanized activities: preferred by respondents who evaluated pleasure, pleasant surroundings, health and exercise, relaxation, and solitude as important. Needs satisfied included staying healthy, physical challenge, pleasant places, and relaxation, but not socialization. Preferences for self-propelled activities increased with education and were more prevalent among intermediate age-groups, but were not influenced by sex, income, or type of household.

o Mechanized and/or non-self-propelled activities: preferred by respondents who evaluated pleasure, an alternative to work, relaxation, challenge, and excitement as important. Needs satisfied included relaxation and pleasant places. Preferences for mechanized activities declined with education, and were more frequent among the intermediate age-groups and among respondents from single-parent families, but were not influenced by sex or income.

On the basis of these profiles, the choice of recreational activities must be viewed as a complex process reflecting interactions between situational factors (socio-economic characteristics), motivational factors (reasons for participating), and needs which are satisfied in various types of activity. No single factor alone fully explains variations in recreational activity preference across a population. Furthermore, it is combinations of motivations and needs which best distinguish between types of activity. While every activity type shared the importance of at least one reason or need with other types, no two types of recreational activity were characterized by the same combination of reasons and needs, nor did they appeal to identical segments of the population.

G. DISCUSSION

The information contained in this summary should have implications for recreational policy, planning, and management at all levels of service delivery.

The data concerning socio-economic variations in activity preferences can assist in providing crude forecasts of demand and participation at the provincial, regional, and local levels, and may act as a check on both the adequacy of currently available resources, facilities, and programs, and the need for further allocation and development in the short- to medium-term future. For example, as the population grows toward larger proportions of older people and senior citizens, one would expect a rising demand for social and passive activities and for golf, while the demand

for downhill skiing and team sport facilities would decrease. Care must be taken, however, to distinguish trends at the specific level to which the service is directed and to recognize the variety of population trends which may yield different conclusions when considered jointly.

The data concerning reasons for participating and the satisfaction of needs may be utilized to guide the enhancement of the quality of recreation resources and facilities so that these needs can be better satisfied. Though it is difficult to translate the findings concerning motivational and satisfaction variables into practice, there is an advantage in knowing that recreational experiences are associated with combinations of motivations and needs. From this, general conclusions can be drawn regarding why people participate; programs can be directed towards groups of people with similar motivations.

The data concerning reasons for participating and the satisfaction of needs also have value in terms of leisure counselling. Recreation counsellors may utilize the findings in assisting individuals in their choice of activities, resources, facilities, and programs. Leisure counselling is becoming more critical as an increasingly complex and varied array of recreation opportunities confronts the individual.

It remains the challenge of those working in recreation to help their clientele satisfy their recreation needs by providing as many opportunities as possible to meet that goal.



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INTRODUCTION

This report presents a detailed analysis and interpretation of data collected in the 1981 "Public Opinion Survey on Recreation" conducted by Alberta Recreation and Parks. Three main sets of data and interrelationships among them are examined, these being responses to questions 1, 2, and 3 of Part II of the questionnaire: recreational activity preferences (favourite recreational activity); reasons for participating in the favourite recreational activity; and the needs which are satisfied by participating in the favourite recreational activity. Some inferences are also drawn about the effects of socio-economic factors on these variables and relationships.

The report is divided into four main sections or phases: Phase I summarizes results derived from an initial analysis which utilized a classification of recreational activity preferences developed by Alberta Recreation and Parks, and outlines some strengths and weaknesses of this analysis. In Phase II, the limitations of the original classification are elaborated, and an alternative classification of recreational activity preferences is proposed, described, and justified. Phase III describes and interprets at some length the results derived from analysis utilizing the revised classification, while implications of the findings are presented in Phase IV.



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PHASE I:
ANALYSIS BASED ON THE ORIGINAL CLASSIFICATION

INTRODUCTION

Phase I of the report presents a summary of the results derived from analyses of relationships between recreational activity preferences, reasons for participating, and the needs which are satisfied by participating in the favourite recreational activity. The analyses described here were based on an original five-part classification of recreational activity preferences, developed by Alberta Recreation and Parks for the purposes of administering the questionnaire: creative-cultural activities; outdoor activities; physical activities; social activities; and leisurely activities.

The interpretation of results is preceded by a detailed description of the data and an overview of the analytical procedures which guided the generation of computer output. Presentation of the results is divided into four sections: relationships between recreational preferences and specific reasons for participating; activity preferences and dimensions of reasons for participating; activity preferences and the satisfaction of needs; and an example of multi-variate analysis of relationships between activity preferences and reasons for participating, controlling for the effects of socio-economic variables. Phase I of the report concludes with some comments on the strengths and weaknesses of the interpretations possible from this initial round of analysis.

THE DATA

The variable-sets examined here consist of:

- 1) Recreational activity preferences;
- 2) Reasons for participating in the favourite activity;
- 3) Needs which are satisfied by participation in the favourite activity;
- 4) Socio-economic variables.

Recreational Activity Preferences

The data concerning recreational activity preferences are based on respondents' identification of a single favourite recreational activity. Of the 2425 individuals who returned the questionnaire, 338 (13.9% of the respondents') failed to specify a favourite activity, or gave a multiple response: the analysis is thus based on a total of 2087 respondents (henceforth referred to as the "sample"). It should be noted, however, that specific analyses use a smaller total due to some respondents' failure or refusal to check one or more statements or categories in questions related to reasons for participating, satisfaction of needs, or socio-economic data.

Specific favourite activities identified by respondents are listed in Table I in rank-order of the frequency with which they were mentioned. For three reasons, however, analysis of preferences must be based on a classification of activities, rather than on specific activities. First, in most surveys of recreational activity preference and participation, a small sample size results in frequencies of activities which are too

TABLE I

RANK ORDER OF SPECIFIC ACTIVITY PREFERENCES
(FAVOURITE ACTIVITIES)

<u>Rank</u>	<u>Activity</u>	<u>n</u>	<u>% of Sample</u>	<u>% of Respondents Stating Preference</u>
1	Camping	191	7.9	9.2
2	Golf	115	4.7	5.5
3	Downhill skiing	111	4.6	5.3
4	Fishing	108	4.5	5.2
5	Hockey	101	4.2	4.8
6	Walking for pleasure	93	3.8	4.5
7	Reading	89	3.7	4.3
8	Swimming	80	3.3	3.8
9	Racquetball, handball	75	3.1	3.6
10	Curling	68	2.8	3.3
10	Hunting	68	2.8	3.3
12	Dancing	52	2.1	2.5
13	Bowling	50	2.1	2.4
14	Bicyling	44	1.8	2.1
15	Jogging	42	1.7	2.0
16	Flower arranging	40	1.6	1.9
17	Horse riding	37	1.5	1.8
17	Tennis	37	1.5	1.8
19	Cross-country	33	1.4	1.6
20	Board games, cards	30	1.2	1.4
21	Hiking	26	1.1	1.2
	Other	597	24.6	28.6

small to permit statistical analysis and inferences. While in the present case this may not pose a problem for the five activities listed by a hundred or more respondents, nor possibly for a further eight activities listed by between fifty and one hundred respondents, the remaining eighty or so activities were not mentioned frequently enough to be examined individually in a statistical analysis. Secondly, even when activities are listed sufficiently frequently to allow for a meaningful statistical analysis the number of categories involved results in an excessively large number of cells in crosstabulation tables, and consequently inhibits ease of interpretation. Thirdly, treating activities separately may obscure some important similarities between types of activities, which from both a theoretical and management perspective are better treated together.

It is thus desirable to organize the data for the purposes of analysis into a set of categories which are sufficiently small in number to permit the use of statistical tests and to generate meaningful interpretations, yet sufficiently large so as not to mask important differences between types of recreational activity preferences. In the initial round of analysis, recreational activity preferences were analysed according to a classification initially developed by Alberta Recreation and Parks to facilitate the respondents' completion of the questionnaire. These groups, and the rank-order in which they were listed by the sample, are shown in Table 2, while specific activities within groups, and their frequencies, are shown in Appendix Table 1.

TABLE 2

"FAVOURITE ACTIVITY" GROUPS: RANK-ORDER OF PREFERENCE

<u>Rank</u>	<u>Type of Activity</u>	<u>n</u>	<u>% of Sample</u>	<u>% of Respondents Stating Preference</u>
1	Outdoor	924	38.1	44.3
2	Physical	740	30.5	35.5
3	Leisurely	235	9.7	11.3
4	Social	95	3.9	4.6
5	Creative-cultural	93	3.8	4.5
	Preference not stated	338	13.9	-
Total		2425	100.0	(2087)100.0

Reasons for Participating in the Favourite Activity

Data on reasons for participating in the favourite activity are derived from responses to sixteen statements in answer to the questions: "People have many reasons for participating in recreation. Based on your favourite activity, how important are each of the following to you?" (emphasis in original questionnaire). Respondents were asked to check each statement, selecting one of the following responses: "Not important", "Somewhat important", or "Important". Analysis of the data took two forms: calculation of mean-scores based on answers from all respondents in each activity-preference group; and identification of the percentage of respondents in each group who checked the "Important" category.

Additionally, three dimensions of reasons for participating were created, these being referred to as "challenge", "relaxation", and "socialization". The statements included in each dimension were as follows:

a). Challenge

1. to compete with others
3. because I am good at it
8. to improve my skills or knowledge
9. for a challenge
12. to feel committed to something
13. for excitement

b). Relaxation

- 4. to relax
- 7. for pleasure
- 11. to do something different from work

c). Socialization

- 5. to socialize with others
- 6. to be alone
- 15. to be with my family

The remaining statements (2, 10, 14 and 16) were excluded from the analysis of dimensions of reasons for participating.

Respondent's scores on the three dimensions were summed, frequency distributions were created, and sub-groups were defined on the basis of inspection of the data. The "challenge" dimension was divided into four categories, the other two dimensions into three categories. The "relaxation" dimension was markedly skewed towards high importance for the sample as a whole; consequently, the sub-groups were defined according to how strongly respondents rated this dimension. The raw data upon which the categories were based, and the frequencies for each category for each dimension, are shown in Appendix Table 2.

Satisfaction of Needs

The data on satisfaction of needs are derived from responses to eight statements in answer to the question: "We would like to know to what extent your personal needs are satisfied through your favourite recreational activity. Please read each statement and indicate how it

applies to you" (emphasis in original questionnaire). Respondents were asked to check each statement, selecting one of the following responses: "Never", "Sometimes", or "Often".

Similar forms of analysis were conducted as reasons for participating. In this case, however, dimensions of the satisfaction of needs were not recognized or created, and the analysis proceeded on the basis of the eight specific statements only.

Socio-Economic Variables

Although information about a large number of socio-economic variables was collected in the questionnaire, only five were selected for examination in this report, age, sex, education, income, and household type. As necessary, the frequencies for each variable were re-coded to prevent undue fragmentation in the analysis.

Analysis

Computer output in the initial round of analysis consisted of the following:

- 1). frequencies for all variables;
- 2). activity preferences by specific reasons for participating and by dimensions of reasons;
- 3). activity preferences by satisfaction of needs;
- 4). activity preferences by socio-economic variables;
- 5). dimensions of reasons by participating by socio-economic variables;
- 6). activity preferences by dimensions of reasons for participating, controlling for the effects of socio-economic variables.

For the most part, analyses of bi-variate and multi-variate relationships were conducted in the form of crosstabulations, a statistical technique which allows for the evaluation of the presence and significance of a relationship (though not necessarily the strength) yet retains enough of the raw data to permit a thorough and meaningful description of the relationship. Mean-scores may also be calculated from these tables. For example, crosstabulations were conducted to identify relationships between the five activity preference types and the sixteen specific reasons for participating in the favourite recreational activity; three sets of data were compiled from these analyses:

- 1). statement mean-scores for each of the five activity classes (reasons for participating treated as the dependent variable);
- 2). per cent responding "important" to each reason for each of the five activity classes (reasons for participating treated as the dependent variable);
- 3). per cent preferring each activity class of those responding "not important", "somewhat important", and "important" to each of the sixteen statements (reasons for participating treated as the independent variable).

The same types of data were derived for relationships between recreational activity preferences and the satisfaction of needs. Taken together, these data can provide answers to the following questions (recognizing, of course, the limitations of the original activity classification):

- 1). which reasons for participating and which needs are seen as most important and least important by each activity preference group?
- 2). which reasons and needs best distinguish between the activity preference groups?
- 3). to what extent does each type of recreational activity represent a means to fulfill specific reasons for participating, and to satisfy recreational needs?

RESULTS

Activity Preferences and Specific Reasons for Participating

In Table 3, the sixteen specific reasons for participating in the favourite activity are listed in rank-order of mean-scores calculated from responses among the sample as a whole (Not important = 1; Somewhat important = 2; Important = 3). Thus, on average, ten of the statements were rated as "somewhat important" to "important" (mean-scores greater than 2.0) while the remaining six were rated, on average, as "not important" to "somewhat important" (mean-scores less than 2.0). The table also shows, however, that mean scores and therefore the importance of specific reasons for participating in the favourite activity, varied between sub-groups of the sample defined according to their activity preferences.

The data in Table 4 show the proportion of the whole sample, and of each activity preference group, who rated the sixteen specific reasons

for participating in the favourite recreational activity as "important", these reasons being presented, as in Table 3, in rank-order of response among the whole sample. Minor but unimportant variations in rank-orders between the two tables should be noted. This table also shows that "pleasure" was by far the most important reason for the sample as a whole, as well as for each of the activity-preference sub-groups. A further four reasons were rated as "important" by more than fifty per cent of the sample, and five reasons by between forty and fifty per cent. Less than one-fifth of the sample, however, rated six of the reasons as important, although, as in the case of the mean-scores presented in Table 3, there were significant variations between the recreational activity preference sub-groups of the sample.

The data in Tables 3 and 4 provide two ways of assessing the relative importance of each specific reason for participating in each type of activity. Mean-scores and percentages which are substantially higher than those for the sample as a whole, and those which result in a ranking of a reason higher among a sub-group than among the sample, indicate a greater importance attached to those reasons by the members of a given sub-groups. Conversely, below-average scores and percentages, and those which result in a ranking of a reason lower among a sub-group than among the sample, indicate a lesser importance attached to that reason by the members of the sub-group.

The data in Tables 3 and 4 were derived from statistical tests in which activity preferences were treated as the independent variable and

TABLE 3
MEAN -SCORES FOR "REASONS FOR PARTICIPATING" STATEMENTS:
SAMPLE* AND ACTIVITY PREFERENCE SUB-GROUPS

<u>Reason</u>	<u>Sample</u>	<u>Creative- Cultural</u>	<u>Outdoor</u>	<u>Physical</u>	<u>Social</u>	<u>Leisurely</u>
Pleasure	2.80	2.86	2.82	2.80	2.81	2.76
Health or exercise	2.57	2.14	2.57	2.76	2.45	2.19
Relaxation	2.57	2.70	2.64	2.44	2.64	2.65
Alternative to work	2.48	2.58	2.50	2.45	2.58	2.37
Pleasant surroundings	2.45	2.39	2.65	2.25	2.46	2.35
Socialize with others	2.32	2.18	2.21	2.45	2.64	2.31
Improve skills, knowledge	2.30	2.69	2.20	2.37	2.31	2.35
Be with family	2.25	2.12	2.41	2.06	2.33	2.23
Challenge	2.21	2.33	2.12	2.39	2.07	1.94
Excitement	2.20	2.01	2.23	2.27	2.26	1.90
Feel committed	1.70	1.99	1.61	1.76	1.72	1.74
Good at it	1.69	1.93	1.64	1.76	1.69	1.56
Community contribution	1.64	1.34	1.46	1.97	1.59	1.43
Be alone	1.58	1.78	1.71	1.35	1.45	1.72
Be recognized	1.34	1.36	1.24	1.45	1.50	1.31

* "Reasons for participating" are listed in rank-order of mean-scores for the sample. In this case, "sample" refers to the total number of respondents minus those who either failed to specify a favourite activity or to check a specific "reasons for participating" statement.

TABLE 4
PER CENT RESPONDING "IMPORTANT" TO "REASONS
FOR PARTICIPATING" STATEMENTS: SAMPLE*
AND ACTIVITY-PREFERENCE SUB-GROUPS

<u>Reason</u>	<u>Sample</u>	<u>Creative-</u>	<u>Outdoor</u>	<u>Physical</u>	<u>Social</u>	<u>Leisurely</u>
		<u>Cultural</u>				
Pleasure	82.0	87.0	82.8	81.5	80.9	78.8
Relaxation	64.4	71.4	68.9	55.3	68.1	71.1
Health or exercise	64.0	40.0	61.7	77.8	56.5	41.1
Alternative to work	59.0	68.5	60.0	57.0	65.9	54.3
Pleasant surroundings	56.8	57.8	69.4	43.1	53.8	50.0
Socialize with others	46.7	41.1	39.5	53.8	70.7	44.9
Be with family	46.6	34.8	56.1	36.9	48.9	43.4
Improve skills, knowledge	45.3	71.0	40.0	47.8	45.6	47.2
Challenge	41.6	46.7	36.6	52.4	31.1	28.7
Excitement	41.0	35.6	41.6	45.8	44.4	23.4
Feel committed	18.8	28.9	15.7	21.7	16.9	18.9
Compete with others	15.0	5.6	8.3	25.9	12.2	11.5
Good at it	14.6	27.5	12.9	15.4	14.6	13.4
Community contribution	14.5	17.6	11.4	16.3	22.2	16.4
Be alone	14.2	20.2	16.6	9.2	5.6	21.7
Be recognized	6.9	8.8	3.3	9.7	13.3	9.3

* "Reasons for participating" are listed in rank-order of the percentage of the sample checking the "important" response category. In this case, "sample" refers to the total number of respondents minus those who either failed to specify a favourite activity or to check a specific "reasons for participating" statement.

reasons for participating as the dependent variable. In contrast, the data in Tables 5 through 9 are based on statistical tests in which the assumed cause-effect relationship was reversed. The data show, therefore, an increase or decline in the frequency with which each type of activity preference was listed as the favourite recreational activity, according to the perceived importance of each specific reasons for participating. The data may be interpreted as follows: in cases where the frequency with which an activity preference type was listed increases with increasing importance of a specific reasons, that reason may be interpreted as important for or appropriate to that grouping of activities. In the reverse case, where the frequency of listing declines with importance of a reason, that reason may be interpreted as unimportant for or inappropriate to that grouping of activities. Where the proportions remain roughly the same regardless of the importance of a reason, or where no trend is apparent, that reason may be interpreted as being unrelated to the preference for that grouping of activities. The results shown in Table 5 through 9 are, of course, complementary to those in Tables 3 and 4, but provide an additional perspective on and insight into relationships between recreational activity preferences and reasons for participating in the favourite recreational activity.

Rather than present a detailed and laborious account of the specific results presented in Tables 3 through 9, a summary matrix has been prepared instead, which highlights the main findings (Figure 1).

TABLE 5

PREFERENCE FOR CREATIVE-CULTURAL ACTIVITIES: EFFECTS OF
IMPORTANCE OF REASONS FOR PARTICIPATING*

<u>Reason</u>	<u>Not</u> <u>Important**</u> %	<u>Somewhat</u> <u>Important**</u> %	<u>Important**</u> %
Compete with others	6.2	3.1	1.7
Health or exercise	16.9	5.2	2.7
Good at it	3.4	4.5	8.6
Relaxation	0.7	4.3	4.9
Socialize with others	7.3	4.0	3.9
Be alone	3.4	5.7	6.4
Pleasure	3.2	3.2	4.7
Improve skills, knowledge	0.7	3.1	7.3
Challenge	3.1	4.8	5.1
Community contribution	3.6	5.4	5.5
Alternative to work	4.3	3.2	5.3
Feel committed	2.8	5.7	6.9
Excitement	7.2	3.6	3.9
Be recognized	4.5	4.3	5.8
Be with family	4.8	6.1	3.4
Pleasant surroundings	7.4	3.2	4.5

* "Reasons for participating" listed in same order as in questionnaire.

** Figures in columns represent percentages of sample sub-groups defined according to perceived importance of each "reason for participating", who specified a favourite activity in the "creative-cultural" activities group.

TABLE 6
PREFERENCE FOR OUTDOOR ACTIVITIES: EFFECTS OF IMPORTANCE
OF REASONS FOR PARTICIPATING*

<u>Reason</u>	<u>Not</u> <u>Important</u> %	<u>Somewhat</u> <u>Important**</u> %	<u>Important**</u> %
Compete with others	54.0	38.7	24.5
Health or exercise	28.7	51.4	42.8
Good at it	48.0	42.4	39.3
Relaxation	32.7	40.3	47.5
Socialize with others	58.0	47.3	37.3
Be alone	35.7	58.0	52.1
Pleasure	35.5	43.1	45.0
Improve skills, knowledge	59.9	44.4	39.2
Challenge	51.7	46.2	39.0
Community contribution	47.5	43.9	34.9
Alternative to work	38.2	45.3	45.3
Feel committed	49.7	41.1	37.1
Excitement	39.5	46.5	45.1
Be recognized	48.2	38.8	21.0
Be with family	31.7	40.3	53.8
Pleasant surroundings	17.7	36.7	54.8

* "Reasons for participating" listed in same order as in questionnaire.

** Figures in columns represent percentages of sample sub-groups defined according to perceived importance of each "reason for participating", who specified a favourite activity in the "physical activities" group.

TABLE 7
PREFERENCE FOR PHYSICAL ACTIVITIES: EFFECTS OF
IMPORTANCE OF REASONS FOR PARTICIPATING*

<u>Reason</u>	<u>Not</u> <u>Important**</u> %	<u>Somewhat</u> <u>Important**</u> %	<u>Important**</u> %
Compete with others	20.6	47.2	61.9
Health or exercise	9.6	25.0	43.5
Good at it	30.9	40.9	37.9
Relaxation	55.3	42.0	30.6
Socialize with others	21.3	34.6	41.3
Be alone	46.5	20.4	23.0
Pleasure	38.7	36.3	35.2
Improve skills, knowledge	25.9	37.0	37.7
Challenge	22.6	33.0	45.1
Community contribution	34.0	36.5	40.5
Alternative to work	38.2	36.9	34.3
Feel committed	33.3	35.9	41.1
Excitement	32.2	33.2	40.0
Be recognized	31.8	44.8	50.0
Be with family	50.2	35.9	37.9
Pleasant surroundings	57.6	42.6	26.9

* "Reasons for participating" listed in same order as in questionnaire.

** Figures in columns represent percentages of sample sub-groups defined according to perceived importance of each "reason for participating", who specified a favourite activity in the "outdoor activities" group.

TABLE 8
PREFERENCE FOR SOCIAL ACTIVITIES: EFFECTS OF
IMPORTANCE OF REASONS FOR PARTICIPATING*

<u>Reason</u>	<u>Not</u> <u>Important**</u> %	<u>Somewhat</u> <u>Important**</u> %	<u>Important</u> %
Compete with others	4.7	4.5	3.6
Health or exercise	8.1	4.8	4.0
Good at it	4.5	4.5	4.5
Relaxation	2.7	4.5	4.8
Socialize with others	2.1	2.6	6.8
Be alone	4.8	5.2	1.8
Pleasure	0.0	5.3	3.3
Improve skills, knowledge	4.4	4.5	4.5
Challenge	5.2	5.3	3.3
Community contribution	3.5	4.8	6.9
Alternative to work	3.0	4.0	5.0
Feel committed	4.1	5.2	4.0
Excitement	4.0	4.4	4.9
Be recognized	3.9	5.3	8.7
Be with family	3.2	5.0	4.7
Pleasant surroundings	3.0	5.4	4.2

* "Reasons for participating" listed in same order as in questionnaire.

** Figures in columns represent percentages of sample sub-groups defined according to perceived importance of each "reason for participating", who specified a favourite activity in the "social activities" group.

TABLE 9
PREFERENCE FOR LEISURELY ACTIVITIES: EFFECTS OF
IMPORTANCE OF REASONS FOR PARTICIPATING

<u>Reason</u>	<u>Not</u> <u>Important**</u> %	<u>Somewhat</u> <u>Important**</u> %	<u>Important**</u> %
Compete with others	14.5	6.4	8.3
Health or exercise	36.8	13.6	7.0
Good at it	13.2	7.8	9.7
Relaxation	8.7	9.0	12.1
Socialize with others	11.2	11.6	10.7
Be alone	9.6	10.7	16.7
Pleasure	22.6	12.1	10.6
Improve skills, knowledge	9.1	11.0	11.3
Challenge	17.5	10.7	7.4
Community contribution	11.3	9.4	12.1
Alternative to work	16.3	10.6	10.1
Feel committed	10.1	12.0	10.9
Excitement	17.1	12.4	6.2
Be recognized	11.5	6.8	14.5
Be with family	10.2	12.6	10.2
Pleasant surroundings	14.3	12.0	9.2

* "Reasons for participating" listed in same order as in questionnaire.

** Figures in columns represent percentages of sample sub-groups defined according to perceived importance of each "reason for participating", who specified a favourite activity in the "leisurely activities" group.

Figure 1. Summary matrix: recreational activity preferences and reasons for participating

	Creative-cultural activities			Outdoor activities			Physical activities			Social activities			Leisurely activities		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Pleasure															○
Health	○	○	○				●	●	●		○	○	○	○	○
Relaxation	●	●	●			●	○	○	○					●	
Alternative to work	●	●					○			●			○		
Pleasant surroundings				●	●	●	○	○	○				○		○
Socialization	○	○	○	○	○	○	●	●	●	●	●	●			
Improve skills	●	●	●	○		○	●								
Be with family	○	○		●	●	●	○	○	○	●					
Challenge	●					○	●	●	●	○	○		○	○	○
Excitement	○						●			●			○	○	○
Commitment	●	●	●	○		○									
Good at it	●	●	●										○		
Community contribution				○		○				●	●	●			
Competition	○	○	○		○	○	●	●	●				○		
To be alone	●	●	●	●			○	○	○	○	○	○	●	●	●
Recognition				○	○	○			●	●	●	●			

A: See table 3

B: See table 4

C: See tables 5 through 9

● Above-average mean-score or percentage (tables 3 and 4); increase in frequency of listing with increasing importance of reason (tables 5 through 9)

○ Below-average mean-score or percentage (tables 3 and 4); decrease in frequency of listing with increasing importance of reason (tables 5 through 9)

Reference should be made, however, to the tables for the detailed data. The matrix shows reasons for participating in the favourite activity which are associated either positively or negatively with types of recreational activity preferences, and thus facilitates the identification of reasons which are either important or unimportant to each of the activity-preference sub-groups of the sample. Equally importantly, it helps to identify reasons which best serve to distinguish between activity preference groups. As a result, it is possible to characterize combinations of reasons perceived as most appropriately fulfilled by particular types of recreational activities, and those which are difficult to fulfill by participating in alternative types of recreational activity.

The following reasons for participating were perceived as most important for those respondents who preferred creative-cultural activities: relaxation, the improvement of skills and knowledge, commitment, "egoism" ("because I am good at it"), and solitude. Perceived as unimportant, i.e. negatively associated with the choice of creative-cultural activities, were health and exercise, socialization and competition.

For the outdoor activities preference group, only two reasons were consistently of above-average importance, these being pleasant surroundings and to be with the family, whereas socialization and recognition were negatively associated with this group. There was also some indication, though less consistently than in the two previous cases,

that skills improvement, commitment, community contribution, and competition were negatively associated with outdoor recreational activity preferences.

Health and exercise, socialization, challenge, and competition were the four reasons most consistently associated in a positive fashion with the physical activities preference group, while relaxation, pleasant surroundings, being with the family, and solitude were negatively associated. Three main reasons were consistently associated with social activity preferences, namely socialization, community contribution, and recognition. Solitude, challenge, and health and exercise were negatively associated with this group. Lastly, the only reason related to leisurely activities was solitude, while health and exercise, challenge, excitement, and pleasant surroundings were negatively associated.

The description of the data summarized in Figure 1, however, merely identifies reasons which were positively or negatively associated with preferences for each type of recreational activity, and does not fully distinguish between the groups. "Socialization", for example, was noted as a reason for preferring physical recreational activities, but since this reason was also important for those respondents preferring social types of activities, it cannot be isolated as a distinguishing characteristic of either group. Similarly, while the data presented in Tables 3 and 4 show that "pleasure" was the single most important reason for preference regardless of the type of activity, this reason also

failed to distinguish between respondents' preferences, and was therefore omitted from the preceding description.

The combination of reasons which best distinguish creative-cultural activities from the four remaining types of activity was the improvement of skills and knowledge, commitment, and "because I am good at it". Solitude was also important to this group, but this was a reason shared with respondents preferring leisurely activities; similarly, while the absence of competition was important for creative-cultural activities this was a characteristic shared with those respondents preferring outdoor activities.

Pleasant surroundings and a family orientation best separated outdoor activity preferences from the other groups, and recognition was negatively associated. Other reasons important to this group of respondents did not distinguish them adequately from the rest of the sample.

The reasons of health and exercise, challenge, competition, that the activity not be relaxing, and the unimportance of surroundings most clearly characterized respondents preferring physical types of recreational activities. For those preferring social activities, the only distinguishing reasons appeared to be recognition and community contribution. Finally, the reasons which separated respondents preferring leisurely activities from the rest of the sample were negative in direction, i.e. the absence of challenge and excitement.

In summary, pleasure is the pre-eminent reason why people prefer

specific recreational activities. Beyond this, however, types of recreational activity appear to provide quite different outlets and fulfill different combinations of objectives. Creative-cultural activities may be described as those which provide an outlet for relaxation, commitment, and the development of skills and knowledge. The absence of competition implies that for those who prefer these activities, the challenge is a personal one, directed towards, for want of a better term, self-improvement.

Leisurely activities, which otherwise share much in common with creative-cultural activities, are far more passive in orientation, given the absence of challenge and excitement, and the apparent indifference expressed towards reasons such as commitment, competition, and the improvement of skills and knowledge. Social activities, as would be expected, are motivated primarily by the importance of socialization, although community contribution and recognition also seem to be relatively important for those who prefer this type of activity.

Several characteristics clearly distinguish physical activities from the remainder. Judging by the reasons for participation checked most frequently as important by members of this activity preference group, physical activities are most "active" in nature, being oriented towards health and exercise, challenge and competition. Socialization is additionally important, but the surroundings in which the activities take place are not. Outdoor activities, in contrast, do appear to demand pleasant surrounds, and these activities are directed towards participation with family rather than friends.

Activity Preferences and Dimensions of Reasons for Participating

Associations between types of recreational activity preference and the "challenge", "relaxation", and "socialization" dimensions are shown in Tables 10, 11 and 12 respectively. In these cases, activity preferences are treated as the dependent variable, and the interpretation is based on the extent to which the frequency of each activity type being listed increased, decreased, or remained the same with increasing importance of the total sum of reasons constituting the dimensions. Thus, it can be seen in Table 10 that the expression of preference for creative-cultural and physical activities increased with the increasing importance of the "challenge" group of reasons for participating, while preferences for outdoor and leisurely activities declined. The "challenge" dimension was not related to preferences for social types of activities.

Table 11 shows recognizable but slight increases in the preference for creative-cultural and outdoor activities as the importance of "relaxation" increased, while the preference for physical activities declined. "Relaxation" did not appear to be strongly related to either social or leisurely types of activity preferences. Preference for creative-cultural activities declined markedly, and for outdoor and leisurely activities slightly with increasing importance of the "socialization" dimension of reasons for participating (Table 12). As would be expected, however, preference for social types of activities increased, as did preference for physical types of activities.

TABLE 10
RECREATIONAL ACTIVITY PREFERENCES AND
IMPORTANCE OF THE "CHALLENGE" DIMENSION

<u>ACTIVITY PREFERENCE</u>	<u>IMPORTANCE OF "CHALLENGE"</u>				
	<u>Not at all</u>	<u>Not very</u>	<u>Somewhat</u>	<u>Very</u>	<u>Total</u>
	<u>Important</u>	<u>Important</u>	<u>Important</u>	<u>Important</u>	
	%	%	%	%	%
Creative-cultural	2.9	3.9	6.3	5.0	4.5
Outdoor	53.4	46.4	44.8	35.2	44.4
Physical	24.0	32.1	36.1	48.6	35.9
Social	4.4	5.2	4.1	4.3	4.5
Leisurely	15.4	12.4	8.7	7.0	10.6
Total	(455)	(461)	(460)	(560)	(1936)

Chi-square = 91.48; d.f. = 12; p = .0001

TABLE 11
RECREATIONAL ACTIVITY PREFERENCES
IMPORTANCE OF THE "RELAXATION" DIMENSION

<u>ACTIVITY PREFERENCE</u>	<u>IMPORTANCE OF "RELAXATION"</u>			
	<u>Low</u> %	<u>Medium</u> %	<u>High</u> %	<u>Total</u> %
Creative-cultural	2.8	5.6	5.1	4.5
Outdoor	40.2	44.9	48.3	44.7
Physical	41.1	36.7	30.0	35.5
Social	4.3	3.9	5.1	4.5
Leisurely	11.5	8.9	11.4	10.8
Total	(669)	(539)	(799)	(2007)

Chi-square = 27.94; d.f. = 8; p = .0005

TABLE 12
RECREATIONAL ACTIVITY PREFERENCES AND
IMPORTANCE OF THE "SOCIALIZATION" DIMENSION

<u>ACTIVITY PREFERENCE</u>	<u>IMPORTANCE OF "SOCIALIZATION"</u>			
	<u>Low</u>	<u>Medium</u>	<u>High</u>	<u>Total</u>
	<u>%</u>	<u>%</u>	<u>%</u>	<u>%</u>
Creative-cultural	6.1	4.8	2.9	4.5
Outdoor	47.4	46.1	40.9	44.6
Physical	31.0	35.3	39.7	35.5
Social	3.1	3.1	6.9	4.5
Leisurely	12.3	10.6	9.6	10.8
Total	(641)	(583)	(726)	(1950)
Chi-square = 35.39; d.f. = 8; p = .0001				

The following conclusions may be drawn about relationships between activity preferences and dimensions of reasons for participating in the favourite recreational activity. Creative-cultural activities represent a simultaneous outlet for challenge and relaxation, while socialization is generally regarded negatively. Physical activities share the importance of challenge with creative-cultural activities, but differ in that socialization is desirable, whereas relaxation is not. The outdoor group of recreational activity preferences resembles the creative-cultural in terms of the importance of relaxation and the unimportance of challenge. Physical and outdoor activities, however, appear to be diametrically opposed: while challenge and socialization were positively related to preferences for physical activities, and relaxation was negatively related, all three relationships were reversed in the case of preferences for outdoor activities.

Socialization is the only dimension clearly related to preferences for social activities. Thus, while this group shares the importance of socialization with physical activities, for example, challenge does not seem to be an important reason for preferring social activities. Also, the dimension of relaxation had no effect on preferences for social activities, further distinguishing them from preferences for outdoor or creative-cultural activities.

Finally, as far as the leisurely activities are concerned, these are neither challenging nor socially-oriented, and the relaxation dimension had no effect on the preference for this group of activities. One

interpretation suggests that these are relatively passive types of activities, motivations for participation in which are not especially strong. Alternatively, it may be that the questionnaire failed adequately to tap the reasons why this group of respondents choose their favourite activities.

Activity Preferences and Satisfaction of Needs

In Table 13, the eight statements describing needs which are satisfied by participation in the favourite recreational activity are listed in rank-order by mean-scores calculated from responses among the sample, as a whole (Never = 0; Sometimes = 1; Often = 2). Thus, on average, all eight needs were evaluated as being satisfied "sometimes" to the frequency with which specific needs are satisfied, varied between sub-groups of the sample defined according to their activity preferences.

The data in Table 14 show the proportion of the whole sample, and of each activity preference group, who reported that each of the needs was satisfied "often" by participation in their favourite recreational activity; these needs are listed, as in Table 13, in rank-order of response among the whole sample. Minor but unimportant variations between the two tables should be noted. In Table 15 the data are derived from a reverse procedure in which recreational activity preferences were treated as dependent variables. Similar methods may be used to interpret the complete set of data concerning associations between recreational activity preferences as were used earlier in the case of reasons for participating. Furthermore, a comparable matrix has been prepared which summarizes the relationships shown in Tables 13 through 15 (Figure 2).

TABLE 13
MEAN-SCORES FOR "SATISFACTION OF NEEDS" STATEMENTS:
SAMPLE* AND ACTIVITY-PREFERENCE SUB-GROUPS

<u>Statement</u>	<u>Sample</u>	<u>Creative- Cultural</u>	<u>Outdoor</u>	<u>Physical</u>	<u>Social</u>	<u>Leisurely</u>
Helps relax	1.70	1.77	1.76	1.62	1.70	1.65
Places pleasing	1.64	1.53	1.75	1.55	1.56	1.52
Helps stay healthy	1.61	1.13	1.67	1.78	1.36	1.10
Sense of accomplishment	1.50	1.80	1.46	1.56	1.38	1.36
Socialize with others	1.44	1.19	1.37	1.59	1.68	1.25
Physically challenging	1.42	0.88	1.46	1.66	1.10	0.78
Increases knowledge	1.36	1.57	1.47	1.15	1.31	1.49
Try new things	1.32	1.62	1.38	1.23	1.40	1.25

* "Satisfaction of needs" statements are listed in rank-order of mean-scores for

the sample. In this case, "sample" refers to the total number of respondents minus those who either failed to specify a favourite activity or to check a specific "satisfaction of needs" statement.

TABLE 14
PER CENT RESPONDING "OFTEN" TO "SATISFACTION OF NEEDS"
STATEMENTS: SAMPLE* AND ACTIVITY PREFERENCE SUB-GROUPS

<u>Statement</u>	<u>Sample</u>	<u>Creative- Cultural</u>	<u>Outdoor</u>	<u>Physical</u>	<u>Social</u>	<u>Leisurely</u>
Helps relax	71.7	76.9	77.2	65.5	69.9	67.8
Helps stay healthy	66.4	37.0	68.6	79.7	44.6	34.9
Places pleasing	65.5	57.8	75.7	58.0	57.0	54.5
Sense of accomplishment	52.4	81.5	49.1	57.3	40.0	43.2
Physically challenging	51.6	22.5	51.8	68.6	27.0	16.3
Socialize with others	49.8	29.2	41.9	62.6	70.2	39.5
Increases knowledge	42.1	59.3	50.1	27.1	37.1	52.5
Try new things	40.1	64.8	44.1	32.8	46.1	34.9

* "Satisfaction of needs" statements are listed in rank-order of the percentage of

the sample checking the "often" response category. In this case, "sample" refers to the total number of respondents minus those who either failed to specify a favourite activity or to check a specific "satisfaction of needs" statement.

TABLE 15
PREFERENCES FOR ACTIVITY GROUPS: EFFECTS OF
"SATISFACTION OF NEEDS"

<u>Statement</u>	<u>Never**</u> %	<u>Sometimes**</u> %	<u>Often**</u> %
<u>A. CREATIVE-CULTURAL ACTIVITIES</u>			
Sense of accomplishment	1.7	1.8	7.1
Increases knowledge	1.5	3.4	6.4
Try new things	1.9	2.8	7.4
Socialize with others	7.6	6.0	2.6
Helps relax	0.0	3.9	4.8
Physically challenging	16.1	4.9	1.9
Helps stay healthy	19.3	6.3	2.5
Places pleasing	11.1	5.1	3.9
<u>B. OUTDOOR ACTIVITIES</u>			
Sense of accomplishment	49.2	47.5	41.6
Increases knowledge	22.9	40.9	53.5
Try new things	35.7	42.8	49.3
Socialize with others	40.7	52.6	37.3
Helps relax	31.8	36.1	48.0
Physically challenging	24.9	49.2	44.7
Helps stay healthy	14.9	47.0	46.0
Places pleasing	16.7	32.2	51.7
<u>C. PHYSICAL ACTIVITIES</u>			
Sense of accomplishment	18.6	32.9	39.0
Increases knowledge	66.4	41.3	22.5
Try new things	45.5	38.8	28.8
Socialize with others	22.9	27.1	44.9
Helps relax	54.5	42.3	32.4
Physically challenging	8.8	26.9	47.6
Helps stay healthy	11.4	23.7	42.9
Places pleasing	55.6	42.6	31.4
<u>D. SOCIAL ACTIVITIES</u>			
Sense of accomplishment	3.4	5.8	3.4
Increases knowledge	3.8	4.9	3.9
Try new things	3.2	4.1	5.1
Socialize with others	1.7	2.9	6.5
Helps relax	0.0	5.2	4.4
Physically challenging	7.8	6.4	2.3
Helps stay healthy	7.0	7.5	3.0
Places pleasing	2.8	5.8	4.0

Cont.....

Cont.

E. LEISURELY ACTIVITIES

Sense of accomplishment	27.1	12.1	9.0
Increases knowledge	5.3	9.5	13.8
Try new things	13.6	11.4	9.4
Socialize with others	27.1	11.4	8.7
Helps relax	13.6	12.5	10.5
Physically challenging	42.5	12.6	3.4
Helps stay healthy	47.4	15.4	5.6
Places pleasing	13.9	14.2	9.0

* "Satisfaction of needs" statements listed in same order as in questionnaire.

** Figures in columns represent percentages of sample sub-groups defined according to reported frequency of satisfaction of needs, specifying favourite activity in one of the five activity preference groups.

Figure 2. Summary matrix: recreational activity preferences and satisfaction of needs

	Creative-cultural activities			Outdoor activities			Physical activities			Social activities			Leisurely activities		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
Helps relax	●	●	●	●	●	●	○	○	○				○		
Places pleasing	○	○	○	●	●	●	○	○	○	○	○		○	○	
Helps stay healthy	○	○	○	●			●	●	●	○	○	○	○	○	○
Sense of accomplishment	●	●	●			○	●		●	○	○		○	○	○
Socialize with others	○		○	○			●		●	●	●		○		○
Physically challenging	○	○	○				●	●	●	○	○	○	○	○	○
Increases knowledge	●	●	●	●	●	●	○	○	○				●	●	●
Try new things	●	●	●			●	○	○	○	●			○	○	○

A: See table 13

B: See table 14

C: See table 15

● Above-average mean-score or percentage (tables 13 and 14); increase in frequency of listing with increasing frequency of satisfaction (table 15)

○ Below-average mean-score or percentage (tables 13 and 14); decrease in frequency of listing with increasing frequency of satisfaction (table 15)

The data summarized in Figure 2 may be interpreted in two ways, namely the needs which are most closely associated with and therefore satisfied by each group of activity preferences, and the types of activities which are most conducive to satisfying (or alternatively may frustrate the satisfaction of) each specific need. Thus, the needs most frequently reported as being "often" satisfied by respondents preferring creative-cultural activities were "a sense of accomplishment" (reported "often" by 81.5% of this group: Table 14), "helps relax" (76.9%), "try new things" (64.8%) and "increases knowledge" (59.3%). Needs less likely to be satisfied in creative-cultural activities were "places pleasing", "helps stay healthy", "physically challenging" and "socialize with others".

Among respondents preferring outdoor activities, the needs most frequently fulfilled, and which were above the average reported by the sample as a whole, were "helps relax" (76.9% responding "often"), "places pleasing" (75.7%) and "increases knowledge" (59.3%). None of the other needs appeared to be strongly associated with these groups of activities, either in a positive or negative fashion.

As far as physical activities are concerned, "helps stay healthy" (79.7% responding "often") and "physically challenging" (68.6%) were the two needs most frequently satisfied, and there was additional but less consistent evidence to suggest that "socialization" and "a sense of accomplishment" are parts of the experience associated with this form of recreational activity. Needs satisfied less frequently by physical than

by other activities were "helps relax", "places pleasing", "increases knowledge" and "try new things".

The need most frequently satisfied by social activities was, as would be expected, to "socialize with others" (70.2% responding "often"). With the exception of "try new things" the remaining needs were reported less frequently as being fulfilled "often" by respondents preferring social activities than by the sample as a whole. Thus, needs inversely associated with or not related to the preference for social activities were "places pleasing", "helps stay healthy", "sense of accomplishment", and "physically challenging".

Only one need was positively associated with leisurely activities, this being "increases knowledge" (52.9% responding "often"). The remaining needs were either negatively associated with or not related to the preference for leisurely activities.

An examination of which activities are most likely to satisfy or frustrate the satisfaction of given needs shows that respondents seeking relaxation were more likely to choose creative-cultural or outdoor activities, but would tend less frequently to choose physical activities as a recreational alternative. The desire for a pleasing recreational environment is best met in the form of outdoor activities. Both health and physical challenge needs are most frequently satisfied in physically-oriented activities, and significantly less so in creative-cultural, social or leisurely recreational pursuits. A sense of accomplishment also finds some outlet in physical activities, but much

more so in the case of creative-cultural activities. The need for socialization is most frequently met among those respondents who prefer social activities, although this aspect is also clearly part of the physically-oriented recreational experience. Respondents who wish to increase their knowledge report this need being most satisfied in creative-cultural, outdoor and leisurely activities, while the wish to try new things is most closely associated with a preference for creative-cultural activities.

Clearly, these results are consistent with those reported above with regard to reasons for participating. Physical activities, for example, emerge once again as being associated with aspects such as physical challenge, health and socialization, while creative-cultural activities are once more shown to have connotations of relaxation, skill and accomplishment. At the same time, however, new characteristics emerge from this second set of data, showing, for example, the "increases knowledge" aspect of leisurely and outdoor activities, and the importance of "trying new things" for those who prefer social activities.

Furthermore, these results demonstrate, perhaps more forcefully than in the case of the findings related to reasons for participating, that it is a combination of needs and motivations which is associated with the preference for types of recreational activities, and which distinguishes between these types, rather than single or specific reasons alone. Thus, for example, it is the combination of relaxation, a sense of accomplishment, the increase of knowledge, and a willingness to try new

things which together characterize creative-cultural activities. While outdoor activities have so much in common with creative-cultural activities, in terms of relaxation and increase of knowledge, it is the importance of these needs together with the desire for a pleasant environment and the unimportance of a sense of accomplishment which best describes this group of recreational activities.

Multi-Variate Analysis

Some of the results reported in the preceding pages were examined further, using a basic form of multi-variate analysis, i.e. the introduction of a third variable in order to more fully understand the reasons for the original relationships, and the conditions under which they occurred. This procedure was deemed to be important for two reasons: first, when three variables are shown to be interrelated, it is necessary to examine each of the original two-variable relationships under controlled conditions of the third variable, in order to test the extent to which the original relationship is real or "spurious", i.e. due to the effects of the third variable. Secondly, it is important to know whether the variation in the dependent variable is the result of a conjoint or combined influence of two or more "independent" variables, and, if so, which of these exerts the strongest effect. Failure to conduct analyses of this kind may result in accepting, as real, relationships which in fact are spurious, and furthermore may foreclose a full understanding of the complex and interrelated sets of factors which together, rather than singly, account for the phenomenon under

examination (in this case, recreational activity preferences).

The analysis proceeded as follows. Computer output was obtained for three initial sets of relationships: types of activity preference by reasons for participating; types of activity preference by socio-economic variables; and reasons for participating by socio-economic variables. Since in most cases these sets of variables were found to be interrelated, a further series of tests was conducted, namely activity preferences by reasons for participating, controlling for the effects of socio-economic variables. Only one example of these results, however, is presented here, but should be sufficient to establish the need to conduct multi-variate analyses, and to indicate the methods used to construct, describe, and interpret tables based on data which show relationships between two variables under controlled conditions of a third variable.

Several qualifications must be recognized regarding this example. First, it is based on only two of the five groups of recreational activity preferences (physical and outdoor): respondents who expressed preferences for other types of activity were excluded from the analysis. This number of groups was chosen since the resulting tables are easier to interpret than are complex tables with three or more categories of the dependent variable. Outdoor and physical activities were chosen for examination because these were the two largest groups (924 and 740 respondents respectively); also, they were shown to be diametrically opposed in terms of relationships with dimensions of reasons for participating. Secondly, reasons for participating were examined in

terms of the three dimensions rather than the sixteen specific statements, and the effects of the "challenge" dimension alone are reported, since this was the one dimension most closely related in a positive fashion to physical activity preferences, and in a negative fashion to outdoor activity preferences. Thirdly, of the socio-economic variables, "age" was chosen for examination, since this was the one for which the most clearly identifiable trends were apparent. Finally, certain categories of the independent and control variables were collapsed during analysis, for ease of identification and interpretation of trends, and to avoid undesirable fragmentation of the data. To summarize, the case of multi-variate analysis described here is characterized by the single most clear-cut set of interrelationships among the three variables. This, of course, is desirable so that the lessons learned at this stage of analysis, and the understanding of complex interrelationships within the data may be applied to results based on the revised classification (see Phase III).

The preference for outdoor types of activity declined, and for physical activities increased with increasing importance of the "challenge" dimension of reasons for participating (Table 16). Among the respondents whose scores on the relevant statements indicated the lowest level of importance of "challenge", 69.0% preferred outdoor activities, compared with only 42.0% of respondents whose scores indicated the highest level of importance of "challenge". Conversely, the preference for physical activities almost doubled from 31.0% of respondents with low

TABLE 16
EFFECT OF PERCEIVED IMPORTANCE OF THE "CHALLENGE" DIMENSION"
OF PREFERENCE FOR OUTDOOR VS. PHYSICAL ACTIVITIES

<u>ACTIVITY</u> <u>PREFERENCE</u>	<u>IMPORTANCE OF "CHALLENGE"</u>				
	<u>Not at all</u>	<u>Not Very</u>	<u>Somewhat</u>	<u>Very</u>	<u>Total</u>
	<u>Important</u>	<u>Important</u>	<u>Important</u>	<u>Important</u>	
	%	%	%	%	%
Outdoor	69.0	59.1	55.4	42.0	55.3
Physical	31.0	40.9	44.6	58.0	44.7
Total	(352)	(362)	(372)	(469)	(1555)
Chi-square = 62.53; d.f. = 3; p = .0001					

TABLE 17

EFFECT OF RESPONDENTS' AGE ON

PREFERENCE FOR OUTDOOR VS. PHYSICAL ACTIVITIES

ACTIVITY PREFERENCE	AGE					
	Up to 24	25 to 34	35 to 44	45 to 64	65 & over	Total
	%	%	%	%	%	%
Outdoor	45.6	54.7	59.7	63.0	53.3	55.5
Physical	54.4	45.3	40.3	37.0	46.7	44.5
Total	(320)	(601)	(310)	(343)	(90)	(1654)

Chi-square = 22.90; d.f. = 4; p = .001

TABLE 18
EFFECT OF RESPONDENTS' AGE ON PERCEIVED IMPORTANCE
OF THE "CHALLENGE" DIMENSION

<u>PERCEIVED</u> <u>IMPORTANCE OF</u> <u>"CHALLENGE"</u>	<u>AGE</u>					<u>Total</u>
	<u>Up to 24</u>	<u>25 to 34</u>	<u>35 to 44</u>	<u>45 to 64</u>	<u>65 & over</u>	
	%	%	%	%	%	%
<u>Not at all</u> <u>important</u>	15.1	18.1	28.0	34.9	46.0	24.5
<u>Not very</u> <u>important</u>	17.6	24.5	26.1	26.1	20.4	23.6
<u>Somewhat</u> <u>important</u>	26.2	25.5	21.0	20.8	17.7	23.4
<u>Very</u> <u>important</u>	41.1	31.9	24.9	18.2	15.9	28.5
<u>Total</u>	(404)	(777)	(410)	(467)	(113)	(2171)

Chi-square = 138.73; d.f. = 12; p = .000

TABLE 19
EFFECT OF PERCEIVED IMPORTANCE OF THE "CHALLENGE" DIMENSION
ON PREFERENCE FOR OUTDOOR VS. PHYSICAL ACTIVITIES,
CONTROLLING FOR AGE

<u>ACTIVITY</u> <u>PREFERENCE</u>	<u>AGE*</u>					
	<u>Up to 34</u>			<u>35 and over</u>		
	<u>"CHALLENGE"</u>			<u>"CHALLENGE"</u>		
	<u>Not at all</u> <u>Important</u>	<u>Not very,</u> <u>Somewhat</u> <u>Important</u>	<u>Very</u> <u>Important</u>	<u>Not at all</u> <u>Important</u>	<u>Not very,</u> <u>Somewhat</u> <u>Important</u>	<u>Very</u> <u>Important</u>
	%	%	%	%	%	%
Outdoor	60.7	56.3	40.9	74.9	58.6	44.4
Physical	39.3	43.7	59.1	25.1	41.4	55.6
Total	(145)	(432)	(325)	(207)	(302)	(144)
Chi-square		23.36			33.93	
Degrees of freedom		2			3	
p		.001			.001	

* Effect of Age, controlling for "Challenge":

- "Not at all important": Chi-square = 8.03; d.f. = 1; p = .01
- "Not very, somewhat important": Chi-square = 0.40; d.f. = 1; n.s.
- "Very important": Chi-square = 0.51; d.f. = 1; n.s.

importance scores for the "challenge" dimension, to 58.0% of respondents with high importance scores. Furthermore, only among those respondents attaching the greatest importance to "challenge" did the preference for physical activities exceed that for outdoor activities.

With the exception of the oldest age-group, there was a marked increase in the preference for outdoor activities, and a decline in the preference for physical activities, with increasing age (Table 17). Only among the youngest age-groups did a majority of respondents prefer physical over outdoor activities.

Given these findings, a decline in the importance of "challenge" with increasing age may be hypothesized. This hypothesis was supported when the appropriate crosstabulation analysis was conducted (Table 18). Thus 46.0% of respondents aged 65 and over rated "challenge" as "not at all important", compared with only 15.1% of respondents aged 24 and under. Conversely, "challenge" was evaluated as "very important" by 41.1% of the youngest respondents, compared with only 15.9% of the oldest group of respondents.

The question remains, however, as to whether the effects of the importance of "challenge" on activity preferences are in reality an artifact of age or vice versa, and if not, what is the relative importance of the effects of each variable on preferences for outdoor versus physical recreational activities. The results of a series of analyses designed to answer these questions are shown in Table 19, in which the age variable has been collapsed into two groups, and the

"challenge" dimension into three. When the relationship between "challenge" and activity preferences is examined under controlled conditions of age, it can be seen that in both cases the preference for outdoor activities declined, while the preference for physical activities increased with increasing importance of "challenge". Both relationships were statistically significant at the .001 level of probability, and thus the original relationship was replicated, i.e. shown to be real and not due to the effects of age. Conversely, when a reverse procedure was conducted (effects of age on preference controlling for the importance of "challenge"), two of the three relationships failed to reach an acceptable level of statistical significance, thus casting doubt on the effects of age as a variable exerting influence on these specific recreational activity preferences. The apparent effect of age, therefore, can largely be interpreted as the result of a declining importance of "challenge" as a reason for recreational preference among progressively older age-groups of the population.

An incorrect interpretation would have been made had the apparent effect of age been accepted at face value; in contrast, the reality and generality of the effect of the "challenge" dimension are more reliably established. This example is generally indicative, therefore, of the care which must be taken with the organization and interpretation of data, and the opportunities for a fuller understanding and more reliable interpretation which are provided by multi-variate than by bi-variate analysis.

SUMMARY AND DISCUSSION

This first phase of the report has described in some detail findings dealing with relationships between recreational activity preferences, reasons for participating in the favourite activity, and the satisfactions which are derived from participating in the favourite recreational activity. It now remains to provide a brief summary of the results and an outline of the advantages and limitations of the ways in which the data were organized and analysed in the first round of analysis.

Summary

According to the classification of activity preferences developed by Alberta Recreation and Parks, outdoor and physical types of recreational activity were those most preferred by respondents to the survey, being favoured by 38.1% and 30.5% of the sample respectively. The three remaining categories, leisurely, social, and creative-cultural activities, were identified less frequently as the favourite recreational activity (9.7%, 3.9% and 3.8% respectively). Among the sample as a whole, the most important reasons for participating in the favourite activity were pleasure (this also being the most important reason for all sub-groups), relaxation, health and exercise, alternative to work, and pleasant surroundings. The relative importance and the strength of importance of these and other reasons, however, differed significantly among sub-groups of the sample defined according to recreational activity preferences. The needs most frequently satisfied by participation in the

favourite recreational activity among the sample as a whole were "helps relax", "helps stay healthy", and "places pleasing". As in the case of reasons for participating, the frequency with which needs are satisfied varied significantly among activity preference sub-groups.

Outdoor activities were most closely associated with pleasant surroundings and being with the family, but negatively with socialization and recognition. The needs most frequently satisfied by outdoor activities were "helps relax", "places pleasing", and "increases knowledge".

Reasons such as health and exercise, socialization, challenge, and competition were the most important for respondents preferring physical activities, who reported needs such as "helps stay healthy" and "physically challenging" as being satisfied most often. Relaxation and pleasant surroundings were mentioned less frequently by this group of respondents.

Positive and conclusive statements regarding leisurely activities are difficult to make: only the importance of solitude and the need to "increase knowledge" served to distinguish this group of respondents in a positive fashion. The data also suggested, however, that leisurely activities tend to be characterized by the absence of health and exercise, physical challenge, excitement, a sense of accomplishment, and a willingness to "try new things".

Not surprisingly, socialization was the most important reason and the need most frequently satisfied among those who expressed preferences for

socially-oriented activities. Factors such as physical challenge, and health and exercise were comparatively unimportant to this group of respondents.

Creative-cultural activities were most closely associated with reasons such as relaxation, commitment, solitude, and the development of skills and knowledge, while competition was negatively associated. The needs most frequently satisfied by creative-cultural activities were "a sense of accomplishment", "helps relax", "try new things", and "increases knowledge".

Discussion

Five main points emerge for further discussion concerning the strengths and weaknesses of the data, data organization, and data analysis described and interpreted in the preceding pages. These are the comprehensiveness, categories of response, and findings with regard to the "reasons of participating" and "satisfaction of needs" data; the advantages and limitations of the dimensions of reasons for participation; the statistical procedures used in the analysis; the benefits to be gained from multi-variate analysis, and its associated problems; and limitations of the original classification of recreational activity preferences. This last point, however, which is perhaps the most fundamental and important in terms of its implications for the interpretation and practical application of the findings from the survey, is not discussed here. Instead, it is given separate and lengthy consideration in Phase II of the report.

Some fairly clear-cut findings emerged for the relationships between reasons for participating, satisfaction of needs, and some of the groups of recreational activity preferences, this being particularly so in the case of physical and creative-cultural activities. On the other hand, little could be concluded positively about the nature of leisurely activities, and it may well be that sixteen "reasons" statements and eight "needs" statements are insufficient to measure the full range and complexity of all types of recreational experience. Furthermore, three categories of response ("not important", "somewhat important" and "important" in the case of the "reasons" statements, and "never", "sometimes", and "often" in the case of the "satisfaction of needs" statements) may not be sufficient to elicit an accurate answer from all respondents, and may therefore serve to obscure rather than clarify important differences in motivations and satisfactions among respondents who prefer quite different recreational activities. Certainly, the relatively narrow range of mean-scores for these data causes problems for the graphic display and interpretation of the results. In future versions of the survey, therefore, it may be advisable to increase the number of statements, as well as the number of pre-coded categories of response. This recommendation, however, must be balanced against an apparent additional length of the questionnaire and the extra time demanded for its completion, both of which may result in an undesirable reduction in the response rate.

Nevertheless, the findings did demonstrate that most categories of recreational experience, as identified and classified in this survey, are multi-dimensional. It was shown that combinations of reasons and needs, rather than individual reasons and needs alone, best distinguished between types of recreational activity preference. In most cases recreational activities are chosen to fulfill simultaneously a set of motivations, and to satisfy simultaneously a series of needs. Thus, while different types of recreational activities may share much in common as far as specific reasons and needs are concerned (e.g. the importance of socialization to both physical and social activities), they are clearly distinct from one another in a multi-dimensional context.

Two methods were used in an attempt to recognize the multi-dimensional characteristics of the recreational experience, these being summary matrices, and the collapsing of several "reasons for participating" statements into three dimensions. As far as the matrices are concerned, this method provides a useful means of summarizing and communicating the essential elements of a large amount of highly detailed data. It is best used to distinguish between types of recreational activity in terms of whether or not an effect of a reason or need exists (in a statistical sense), and if so, in what direction. This procedure is less successful, unless additional symbols were to be used, in identifying the strengths of relationships between variables, i.e. the relative importance of a reason for participating, or the relative frequency with which a need is satisfied, when two or more activities

share the same reason or needs. For this purpose, the tables upon which the matrix is based must be consulted.

The collapsing of specific reasons for participating into dimensions is also a useful procedure for the purposes of analysis and interpretation, in that it facilitates a combined examination of what is otherwise a large amount of fragmented data. Several limitations should be recognized, however. First, only twelve of the specific reasons were used to create the dimensions, since the remaining four did not appear on inspection, to be closely related to those that were included. Consequently, an interpretation of the dimension data excludes certain reasons for participating of high importance to specific recreational activity groups (e.g. health and exercise in the case of physical activities), and therefore will inevitably be incomplete. Secondly, the creation of dimensions represents an averaging procedure in which extremes of response (which may be important for explaining variations in the dependent variable) are obscured. However, the benefits to be gained from this process of generalization probably exceed the interpretive and explanatory cost involved. More seriously, the combination of several reasons for participating into a single dimension is not always entirely appropriate for some groups of recreational activity preference, when the reasons included in the specific dimension are in conflict, i.e. act in opposite direction on the dependent variable. This is not a problem in the case, for example, of the effect of the "challenge" dimension on the preference for physical activities, since the increasing importance of

all six component statements was generally associated with an increasing preference for physical activities. On the other hand, while the preference for creative-cultural activities also increased with the increasing importance of the "challenge" dimension, this was not true for all six of the specific reasons which constitute the dimension. Thus, while the preference for creative-cultural activities increased with the increasing importance of "egoism", improvement of skills and knowledge, challenge, and commitment, it declined with the increasing importance of the two other reasons, namely competition and excitement. An alternative method of classifying reasons for participating, however, which would entirely overcome this problem, is not immediately available or obvious. Thirdly, one of the dimensions ("relaxation") was excessively skewed towards high importance, and the points of division used to create sub-groups were based on an arbitrary procedure of inspection rather than on the existence of clearly defined categories. The distinctions made are therefore relatively fine ones and may not reflect real differences, or ones which are important in terms of applying the results in a recreational management context.

As far as the statistical procedures used in the analysis are concerned, the types of data collected in this part of the survey (nominal and ordinal) strictly preclude the use of techniques which require that the data be in interval or ratio form. As a result, all of the analyses and statistical procedures which, as noted earlier (p. 8), allows for the evaluation of the presence, direction, and statistical

significance of a relationship between two or more variables, but not its strength. It may be difficult, therefore, to pinpoint the most important variable in a set of relationships. On the other hand, crosstabulation offers an important benefit in that it retains enough of the raw data to permit thorough and meaningful descriptions and interpretations of relationships which are more useful (from the standpoint of understanding the precise nature of the relationships and applying the results) than techniques which summarize only the strength and direction of relationships (e.g. correlation and regression). Furthermore, by presenting the results in terms both of percentages and mean-scores derived from crosstabulation, and by reversing the assumed cause-and-effect relationship between "independent" and "dependent" variables, additional and complementary insights into the data can be gained. In summary, though not sophisticated in a statistical sense, the analytical techniques employed here were sufficient to gain at least an overview of the ways in which reasons for participating and satisfaction of needs are related to preferences for various types of recreational activity.

Finally, several advantages of conducting multi-variate as opposed to bi-variate analysis were noted with reference to one example of the former. If this procedure is used it is possible to re-examine relationships between two variables through internal replication and to ensure whether the original relationship is real, or whether it is spurious due to the effects of a mutual association with a third

variable. If the former is true, then the relative importance of the two "independent" variables can be determined. Unfortunately, this procedure requires a very large sample size, and is limited in application to relatively large sub-groups of a sample. This was not the case for three of the activity types examined in Phase I, nor for several of those analyzed using a revised classification in Phase III of the report.

PHASE II:
DEVELOPMENT OF A REVISED CLASSIFICATION
OF RECREATIONAL ACTIVITY PREFERENCES

INTRODUCTION

As discussed in Phase I of the report, there are three reasons why an analysis of recreational activity preferences should be based on a classification rather than on specific activities. In most cases, the frequency with which specific activities are reported is too small to permit meaningful statistical analyses and inferences; the number of categories in a crosstabulation utilizing specific activities results in an undesirably large number of cells; and the treatment of activities separately may obscure some important similarities between types of activities.

Phase II of the report is concerned with a critical review of the limitations of the original activity preference classification in which recreational activities were organized into five groups for the purposes of analysis and interpretation: outdoor, physical, leisurely, social, and creative-cultural activities. A revised classification is also proposed and justified. All the data are based on answers to Question I, Part II of the questionnaire: "Please rank your three favourite recreational activities and indicate how many times you participated in each during the last twelve months" (emphasis in original questionnaire). Both the original and revised classifications used only the favourite recreational activity listed first.

LIMITATIONS OF THE ORIGINAL CLASSIFICATION

The findings described at some length in Phase I have succeeded in demonstrating a number of reasonably consistent differences in reasons for participating, and the satisfaction of needs among respondents classified according to their recreational activity preferences. The differences in many instances, however, were ones better characterized as having statistical significance rather than importance from either a management or a theoretical perspective. Furthermore, the statistical significance of differences may be as much an artifact of the large sample size as it is of real and important differences in motivations and needs among people preferring different types of recreational activity. Thus, the analyses and interrelationships described previously may not be optimal, either in terms of furnishing theoretically useful insights into the reasons for variations in recreational activity preferences, or in terms of generating management applications.

The existence of these concerns may be due, at least in part, to the typology of activity preferences which was used in the initial round of analysis reported in Phase I. There are essentially two aspects to this problem. First, activities which for various reasons have little in common may be treated together. Secondly, activities which are best examined within the same group may appear in different groups. As far as the first aspect is concerned, the inclusion of many disparate and non-comparable activities within a particular category, largely as a matter of convenience, effectively represents an averaging of potentially

important variations, which are, in consequence, masked or obscured.

Certain categories contain recreational activities which are quite different from one another in terms of facility requirements, the nature of the experience for the recreationist, and other dimensions (e.g. environmental versus social orientation, mechanized versus non-mechanized activities) and, indeed, activities which may be in conflict under conditions of competition for recreational space. The category of outdoor activities, for example, contains both cross-country skiing and snowmobiling, the participants in which have been shown in numerous studies to express fundamentally different attitudes, preferences, and motivations for participating in recreation generally and their preferred activity specifically. In the same category, downhill skiing, fishing, rollerskating, and walking for pleasure, as examples, are likely to appeal to different age-groups, occur in markedly different environments, and require different levels and types of facility development.

In the present instance, the second aspect is less problematic. Activities which should be classified together according to criteria such as those described in the previous paragraph may appear in different categories. Board games and cards, for example, are probably better treated as social than as leisurely activities, since they require the participation of other people. Also, there seems to be no underlying rationale for the assignment of specific activities to the outdoor or physical groups. Baseball, football, jogging, and tennis, as examples, could quite justifiably be classed as "outdoor" activities, and there is

no a priori reasons why canoeing, cross-country skiing, and rollerskating should not be described as "physical" activities.

The original five-part classification may fail, therefore, to differentiate satisfactorily between types of recreationists because of overlap, thus decreasing between-group variation. More seriously in the present instance, the unacceptably broad range of activities within categories tends to increase within-group variation. From the standpoint of discriminating between recreational activity preferences, both effects are undesirable. Furthermore, the original classification may fail to provide useful results for the development and management of recreational programs, facilities, and resources, due to the non-substitutability of activities, and potential conflicts which may exist between them.

THE REVISED CLASSIFICATION

Requirements

For these reasons, the development of an alternative recreational activity preference typology is desirable which, insofar as is possible, should simultaneously fulfill three requirements. First, it should group activities according to similarities in terms of dimensions such as individual versus group participation, indoor versus outdoor activities, mechanized versus non-mechanized activities, and active versus passive activities. No group should contain two or more activities which have the potential to conflict seriously with one another in the use of recreational resources and facilities. In general, each class should

consist of one or more activities whose participants have been demonstrated in past recreation research to share comparable attitudes, motivations, and preferences. Thus, from both an analytical and a practical or policy perspective, a classification should seek to minimize within-group variation at the same time as maximizing between-group variation.

Secondly, the classification should provide some practical benefits such that recreation planners and managers can take advantage of the results, by knowing as precisely as possible what motivations are important and what needs are satisfied by participation in various forms of recreational activity. Thirdly, a revised typology should allow for a meaningful re-aggregation of the data where appropriate for analysis, e.g. in cases where given classes are too small in numbers of respondents to permit the application of certain kinds of statistical procedures, these classes may be re-combined into larger groups at the next upward level in the hierarchy.

Clearly, no classification can meet all of these or any other criteria simultaneously and perfectly. In the absence of complete information about the motivations and needs associated with every type of recreational activity, there can be no guarantee that activities are always and optimally grouped together to fulfill the criterion of similarities in attitudes, motivations, and preferences. A hierarchical division of activities according to all possible dimensions at each successive level of division would result in several theoretically

possible but non-existent categories, and an undesirable fragmentation of the data. And the objective of providing recreation managers with the most precise level of detail about motivational variations in preferences must be balanced against the need to aggregate activities in order to carry out the analysis.

The Classification

Nevertheless, an attempt has been made to develop a revised classification, in order to meet the aforementioned objectives, subject to the constraints described in the previous paragraphs (Figure 3 and Appendix Table 3). The classification, which results in the identification of eleven distinct groups of recreational activity (Table 20), recognizes a primary difference between urban and extra-urban forms of recreation, representing 64.7% and 35.3% respectively of respondents whose favourite activity could be classified in one of the eleven groups.

Within the urban group, a distinction is made between relatively passive activities (18.3%) and relatively active activities (46.4%). The relatively passive activities are further subdivided into creative-cultural (5.8%), social (5.7%), and passive (6.8%), while the relatively active activities are subdivided into individual activities, all of which may be generally described as exercise-oriented (25.8%), and group activities (20.6%). Based on the formality of the activity, a further distinction is made within this last sub-group, namely that between golf (5.8%) and team sports (14.8%).

Figure 3. Revised activity preference classification

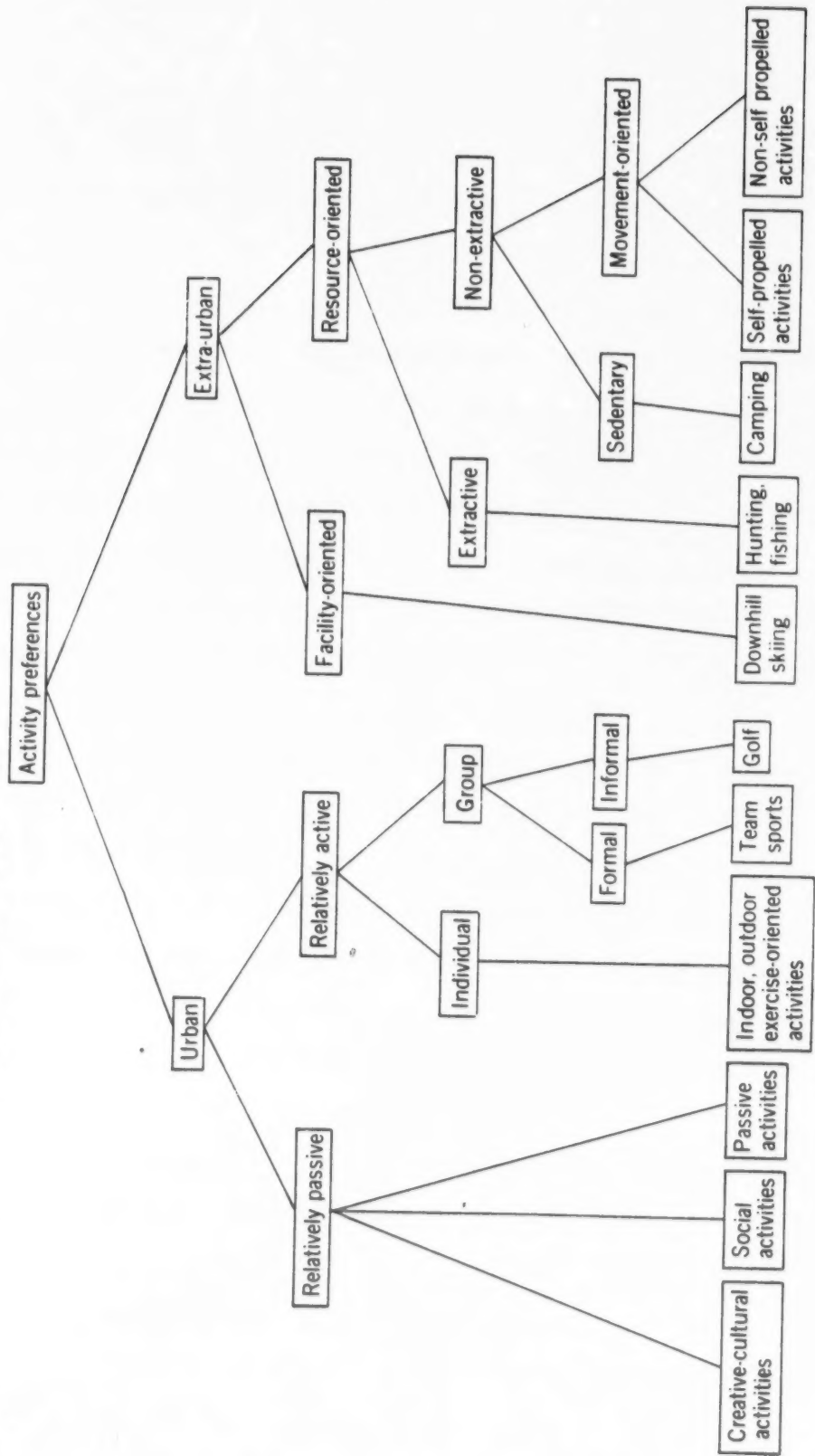


TABLE 20
RANK ORDER OF ACTIVITY PREFERENCE GROUPS:
REVISED CLASSIFICATION

<u>Rank</u>	<u>Type of Activity</u>	<u>n</u>	<u>% of Sample</u>	<u>% of Respondents Stating Preference</u>
1	Exercise-oriented	512	21.1	24.5
2	Team Sports	293	12.1	14.0
3	Camping	191	7.9	9.2
4	"Extractive"(hunting&fishing)	176	7.3	8.4
5	Passive	134	5.5	6.4
6	Non-self-propelled	127	5.2	6.1
7	Creative-cultural	116	4.8	5.6
8	Golf	115	4.7	5.5
9	Social	113	4.7	5.4
10	Downhill skiing	111	4.6	5.3
11	Self-propelled	96	4.0	4.6
Total			(2425)	(2087)

As far as the extra-urban activities are concerned, a useful primary distinction can be made between downhill skiing as a facility-oriented activity (5.6%), and the remainder, which are generally resource-oriented (29.7%). The latter category can further be subdivided according to extractive activities such as hunting and fishing (8.9%) and non-extractive activities (20.9%), while within the latter a distinction must be made between camping as a sedentary activity (9.6%) and the remaining activities, which are oriented towards movement (11.2%). Finally, the movement-oriented activities are further differentiated using the commonly-recognized distinction between mechanized or non-self-propelled activities (6.4%) and non-mechanized or self-propelled activities (4.8%).

A classification of this kind facilitates a more meaningful grouping of activity preferences than did the initial five-part typology utilized in the first round of analysis. Groups of recreational activity preferences are distinguished on the basis of dimensions such as the setting, the orientation to resources and facilities, individual versus group participation, and active versus passive activities.

Re-aggregation is still possible should this be required. The results derived from an analysis of the data using this classification are also likely to be more useful in the context of the development of policy and the administration of recreational resources and facilities.

Limitations

Three main limitations of the revised classification should be noted. First, the subdivision of higher-level groups was carried out using inconsistent points of division (e.g. the first division in the urban category was passive versus active activities, whereas facility-versus resource-oriented activities constituted the first point of division among extra-urban activities). Secondly, the allocation of specific activities was, in some cases, largely a matter of expedience. For example, cross-country skiing was placed in the extra-urban class, even though it is recognized that much participation in this activity occurs in an urban setting. Thirdly, some of the categories may be too small to permit a thorough multi-variate analysis. However, while the largest group in the revised classification (exercise-oriented activities: 512 respondents) is considerably smaller than the largest group in the original classification (outdoor activities: 924 respondents), the smallest group in the revised classification (self-propelled activities: 96 respondents) is comparable in size to the two smallest groups in the original classification (social activities: 95 respondents; creative-cultural activities: 93 respondents).

PHASE III

ANALYSIS BASED ON THE REVISED CLASSIFICATION

INTRODUCTION

Phase III of the report presents further results derived from the analysis of relationships between recreational activity preferences, reasons for participating in the favourite recreational activity, the needs which are satisfied by participating, and five socio-economic variables, namely age, sex, education, income, and type of household. In this case, the analysis is based on the revised classification of recreational activity preferences outlined in Phase II in which eleven groups were identified, namely creative-cultural, social, passive, exercise-oriented activities, team sports, golf, downhill skiing, camping, extractive, self-propelled, and mechanized recreational activities.

The interpretation of results is preceded by a brief description of the statistical manipulation of the data and an overview of the computer output. Specific comments representing guides to the interpretation of tables, however, are made at appropriate points elsewhere in the text. Presentation of the results is sub-divided into the following sections: relationships between recreational activity preferences and specific reasons for participating; activities preferences and the satisfaction of needs; and socio-economic variations in activity preferences. A brief

assessment is also made of socio-economic variations in reasons for participating and in the satisfaction of needs. There then follows a summary discussion of the extent to which the original results were confirmed when a set of multi-variate analyses among the four sets of variables (preferences, reasons, needs, and socio-economic variables) was conducted. Phase III of the report concludes with a summary of the main findings.

DATA ANALYSIS

Computer output for the analysis based on the revised classification consisted of the following:

- 1) activity preferences by specific reasons for participating and by dimensions of reasons;
- 2) activity preferences by satisfaction of needs;
- 3) activity preferences by socio-economic variables;
- 4) reasons for participating and satisfaction of needs by socio-economic variables;
- 5) activity preferences by reasons for participating and by satisfaction of needs controlling for the effects of each socio-economic variable;
- 6) activity preferences by socio-economic variables controlling (separately) for the effects of reasons for participating and satisfaction of needs.

The computer output included twelve categories of recreational activity preferences, namely the eleven categories of the revised classification, together with an "other" class. The latter, however, has been excluded from the tables in Phase III and is not referred to in the text.

As in Phase I, all results are presented in the form of mean-scores and percentages derived from crosstabulations. Where possible and appropriate, chi-square values and levels of significance are quoted, with the exception of tables describing socio-economic variations: in most of these cases, small amounts of extraneous data appeared in the computer output (e.g. the occasional inclusion of "other", "no response", or "multiple response" categories). Here, the data have been cleaned for presentation in the report, as the small numbers involved in any given instance are extremely unlikely to affect the main trends depicted in any significant way, or to alter the inferences and conclusions to be drawn from the data. Certainly, the potential effects involved cannot be considered sufficiently serious as to warrant the time and effort required to re-calculate chi-square values by hand, or to justify an additional run of the computer analysis.

As far as the multi-variate analysis, interpretation, and description of results are concerned, the results are necessarily presented in an abridged form. The computer analysis resulted in output exceeding two thousand pages, and close to one thousand crosstabulation tables were produced. Consequently, summary tables have been prepared to define the

extent to which original relationships were confirmed or rejected under controlled conditions of test variables. Some examples, however, are introduced for the purpose of clarifying the large number of relationships summarized.

Taken together, the findings presented in Phase III of the report may be used to answer the following questions:

- 1) which reasons for participating were viewed as most important by each activity-preference group?
- 2) which needs were most often satisfied by participation in the various classes of recreational activity?
- 3) which reasons and needs best distinguish between the recreational activity preference groups?
- 4) to what extent does each type of recreational activity represent a means to fulfill specific reasons for participating, and to satisfy recreational needs?
- 5) to what extent do various types of recreational activity appeal to sub-sections of the population defined according to socio-economic characteristics?

FINDINGS

Recreational Activity Preferences and Reasons for Participating

a) Data presentation and interpretation

In Table 21, the sixteen specific reasons for participating in the favourite recreational activity are listed in rank order of mean-scores calculated from responses among the sample as a whole (Not important = 1; Somewhat important = 2; Important = 3) Thus, on average, ten of the statements were rated as "somewhat important" to "important" (mean-scores greater than 2.0), while the remaining six were rated, on average, as "not important" to "somewhat important" (mean-scores less than 2.0). Mean-scores for each of the activity-preference sub-groups are also shown.

The data in Table 22 show the proportion of the whole sample, and of each activity-preference sub-group, who rated the sixteen specific reasons for participating in the favourite recreational activity as "important", these reasons being presented, as in Table 21, in rank-order of response among the whole sample. Minor and unimportant variations in rank-orders between the two tables should be noted. This table also shows that "pleasure" was the most important reason cited for participating among the sample as a whole, as well as for all but one of the activity-preference sub-groups. A further four reasons were rated as "important" by more than fifty per cent of the sample, and five reasons by between forty and fifty per cent. Less than one-fifth of the sample,

however, evaluated the remaining six reasons as important.

In the case of the revised classification, an additional set of tables comparable to Tables 5 through 9 in Phase I, in which recreational activity preferences were treated as dependent variables, was not prepared. In this instance, differences between activity-preference groups on the basis of reasons for participating were more clear-cut and more easily identifiable than were those according to the initial classification, and thus this additional procedure was not deemed necessary.

The interpretation of relationships between reasons for participating and recreational activity preferences is based on an examination of two aspects of the data displayed in Tables 21 and 22, and summarized in Table 23. First, in an attempt to discriminate between recreational activity preferences, it is necessary to identify those reasons for participating which, either singly or in combination, best serve to distinguish each category of recreational activity preferences from the rest. Thus, for example, reasons such as pleasant surroundings, challenge, socialization and competition were the set of characteristics evaluated as important more frequently by golfers than by other recreationists, while a greater importance was attached to relaxation, the improvement of skills and knowledge, commitment, and solitude by those respondents who preferred creative-cultural activities. It is also clear that it is combinations of reasons rather than single reasons alone which best discriminate among preference-groups. For instance, while

TABLE 21
REVISED CLASSIFICATION : MEAN - SCORES FOR
"REASONS FOR PARTICIPATING" STATEMENTS

<u>Reason</u>	<u>Sample</u>	<u>Creative- Cultural</u>	<u>Social</u>	<u>Passive</u>	<u>Exercise</u>	<u>Team Sports</u>	<u>Golf</u>	<u>Downhill Skiing</u>	<u>Hunting & Fishing</u>	<u>Camping</u>	<u>Self- Propelled</u>	<u>Mechan- ized</u>
Pleasure	2.81	2.81	2.74	2.78	2.78	2.78	2.89	2.86	2.77	2.87	2.90	2.81
Health, exercise	2.57	2.21	2.41	2.13	2.80	2.74	2.61	2.62	2.42	2.57	2.66	2.46
Relaxation	2.57	2.68	2.63	2.68	2.55	2.28	2.65	2.43	2.66	2.80	2.63	2.58
Work alternative	2.48	2.52	2.55	2.32	2.40	2.50	2.39	2.40	2.55	2.70	2.38	2.58
Pleasant surroundings	2.46	2.42	2.43	2.30	2.36	2.12	2.56	2.60	2.69	2.81	2.70	2.58
Socialize	2.33	2.08	2.58	2.25	2.24	2.59	2.54	2.32	2.15	2.36	2.70	2.48
Skills, knowledge	2.31	2.51	2.36	2.34	2.25	2.40	2.31	2.43	2.29	2.11	1.97	2.33
Be with family	2.25	2.21	2.29	2.14	2.13	2.03	2.17	2.10	2.47	2.76	2.12	2.30
Challenge	2.21	2.27	2.10	1.79	2.15	2.49	2.35	2.51	2.25	1.91	2.20	2.33
Excitement	2.20	1.94	2.21	1.75	2.09	2.50	1.97	2.53	2.35	2.23	2.08	2.37
Commitment	1.70	1.90	1.72	1.62	1.75	1.81	1.57	1.60	1.60	1.60	1.53	1.60
Good at it	1.69	1.86	1.72	1.54	1.67	1.91	1.56	1.90	1.63	1.50	1.56	1.73
Contribution	1.67	1.75	1.80	1.59	1.60	1.87	1.68	1.48	1.63	1.68	1.30	1.59
Competition	1.64	1.36	1.68	1.23	1.62	2.23	1.89	1.63	1.51	1.38	1.18	1.68
Be alone	1.57	1.72	1.44	1.96	1.53	1.26	1.26	1.56	1.71	1.78	1.90	1.66
Recognition	1.34	1.33	1.56	1.22	1.31	1.62	1.22	1.34	1.19	1.18	1.20	1.33

both golfers and downhill skiers evaluated pleasant surroundings and challenge as more important than did most if not all other groups of recreationists, these two groups were differentiated in terms of the comparatively higher importance that golfers placed on socialization and competition, and the comparatively higher importance that downhill skiers attached to reasons such as excitement, and the improvement of skills and knowledge.

Differences such as these may be identified following the same procedure as was used for the interpretation of comparable results derived using the initial classification, and shown in Tables 3 and 4 of Phase I of the report. Mean-scores and percentages which are substantially higher than those for the sample as a whole, and those which result in a ranking of a reason higher among an activity-preference group than among the sample, indicate a greater importance attached to that reason by the members of the group. These characteristics are summarized in Table 23.

Secondly, it is also important to know which reasons for participating were ranked highest by the members of each activity-preference group. The fact that a particular reason discriminated between groups because it achieved a higher evaluation of importance among one or more groups does not necessarily mean that it was of low importance for other groups of recreationists, a case in point being the reason "for pleasure," which was, as noted above, ranked first in importance by members of all but one of the eleven activity-preference

TABLE 22

REVISED CLASSIFICATION : PERCENT RESPONDING "IMPORTANT"
TO "REASONS FOR PARTICIPATING" STATEMENTS

<u>Reason</u>	<u>Sample</u>	<u>Creative-</u>		<u>Social</u>	<u>Passive</u>	<u>Exercise</u>	<u>Team</u>	<u>Golf</u>	<u>Downhill</u>		<u>Hunting</u>	<u>Camping</u>	<u>Self- Propelled</u>	<u>Mechan- ized</u>
		<u>Cultural</u>	<u>Cultural</u>						<u>Skiing</u>	<u>Fishing</u>				
Pleasure	82.0	82.2	75.8	79.7	78.9	80.8	89.3	86.5	80.3	87.4	90.3	83.5		
Relaxation	64.2	70.5	68.3	70.6	62.3	45.9	70.8	54.1	69.4	81.5	65.6	64.8		
Health, exercise	63.9	42.9	54.7	40.5	81.4	75.6	65.8	65.8	50.3	58.7	67.7	52.8		
Work alternative	59.1	64.5	65.8	48.4	53.2	61.5	52.7	52.3	62.6	73.7	50.5	65.1		
Pleasant surroundings	56.8	59.6	53.9	46.4	51.0	35.1	61.5	63.1	72.5	82.2	73.4	54.8		
Socialize	46.8	35.0	64.4	42.1	40.5	63.8	58.9	44.1	34.7	47.6	26.1	46.0		
Skills, knowledge	46.6	41.5	45.2	37.6	42.2	33.3	43.1	37.3	57.6	81.5	38.0	48.8		
Be with family	45.3	59.8	48.2	45.2	43.6	48.6	43.4	50.5	44.5	34.8	42.9	45.1		
Challenge	41.7	43.8	33.0	21.7	40.2	58.1	46.3	56.8	43.7	24.1	40.7	47.5		
Excitement	41.1	31.1	41.6	16.4	36.0	58.1	30.2	58.6	48.5	40.4	34.8	50.4		
Commitment	18.7	26.2	17.1	13.9	22.2	22.2	16.3	14.4	13.6	14.4	12.0	14.8		
Competition	15.1	5.8	15.5	3.4	13.9	38.3	17.6	12.6	9.5	5.4	3.3	12.2		
Good at it	14.7	25.0	17.0	9.4	13.6	20.6	7.7	18.0	14.5	9.1	7.7	15.8		
Contribution	14.5	17.1	20.4	13.9	12.8	21.0	17.0	5.5	12.9	15.0	2.3	8.1		
Be alone	14.2	15.5	6.2	29.8	12.3	6.4	8.7	10.9	18.9	18.8	21.3	18.5		
Recognition	7.0	6.8	15.8	7.6	6.9	13.5	1.9	4.5	4.2	2.2	2.2	4.1		

TABLE 23
SUMMARY OF RELATIONSHIPS BETWEEN
ACTIVITY PREFERENCES AND REASONS FOR PARTICIPATING

<u>Reason</u>	<u>Creative- Cultural</u>	<u>Social</u>	<u>Passive</u>	<u>Exercise</u>	<u>Team Sports</u>	<u>Golf</u>	<u>Downhill Skiing</u>	<u>Hunting & Fishing</u>	<u>Camping</u>	<u>Self- Propelled</u>	<u>Mechan- ized</u>
Pleasure	-	-	-	+	+						
Health, Exercise	+		+		-						
Relaxation			-								
Work alternative			-								
Pleasant surroundings			-								
Socialize	-	+		-	-				+		-
Skills, knowledge	+			+	+	+	+	+	+	+	+
Be with family											
Challenge			-				+				
Excitement	-	-	-		-		-	+			
Commitment	+		-		+	+	+		+		
Good at it	+				+	-	+	+			+
Contribution		+	-		+	-	-	-	-		+
Competition	-				+		+		-		-
Be alone	+	-	+		+	+	-		-		
Recognition		+	-		+	-				+	

+ Above-average mean-score (Table 21) or percentage (Table 22)
- Below-average mean-score (Table 21) or percentage (Table 22)

groups. An additional identification, therefore, of the most important reasons for participating among each group of respondents, regardless of whether these reasons succeeded or failed in distinguishing between groups, can assist recreation planners and managers in allocating resources, providing facilities, and creating those conditions which are most conducive to fulfilling the reasons for participating in varied forms of recreational activity.

b) Results : preferences and reasons

Among respondents expressing a preference for creative-cultural types of activity, the most important reasons for participating, in rank order, were pleasure (82.2% responding "important"; Table 22), relaxation (70.5%), an alternative to work (64.5%), the improvement of skills and knowledge (59.8%), and pleasant surroundings (59.6%). Of these reasons, two were described as important by respondents preferring creative-cultural activities more frequently than the average among the sample as a whole, these being relaxation, and the improvement of skills and knowledge. In addition three other reasons (commitment, "because I am good at it," and solitude), while not listed among the most important reasons by this group of respondents, also received mean-scores and percentages substantially higher than the sample averages. Perceived as unimportant, i.e. negatively associated with this group of activity preferences, were socialization, excitement, competition and, especially, health and exercise, this last reason receiving a markedly lower

mean-score (Table 21) and percentage (Table 22) than among respondents preferring most other types of recreational activity.

Perhaps surprisingly, socialization ranked only fourth as a reason for participating among respondents preferring social activities, being rated as "important" by 64.4% of the group, for whom pleasure (75.8%), relaxation (68.3%), and an alternative to work (65.8%) were evaluated as rather more important. Nevertheless, this group rated socialization as a more important reason for participating than did any other activity-preference group, and described community contribution and recognition as more important than among the sample as a whole, even though these latter reasons were ranked comparatively low. Reasons receiving mean-scores and percentages lower among socially-oriented respondents than among the sample included health and exercise, challenge, and solitude.

Only two reasons for participating were rated as "important" by more than fifty per cent of respondents expressing preferences for passive activities, these being pleasure (79.7%) and relaxation (70.6%), and of these only the latter received a higher mean-score and percentage than among the sample as a whole. In addition, solitude was somewhat more important to this group than to all other groups, but in general, the preference for passive activities is best described in negative terms. Thus the following reasons received below-average mean-scores and percentages: health and exercise, alternative to work, pleasant surroundings, be with family, challenge, excitement, "good at it",

competition and recognition, and of these, health and exercise, pleasant surroundings, challenge, and excitement received markedly low mean scores (Table 21) and percentages (Table 22).

The only reason clearly distinguishing exercise-oriented activity preferences from most of the rest was health and exercise, a not unexpected finding. In fact this reason, which was described as "important" by 81.4% of exercise-oriented recreationists, was ranked first by this group. Pleasure, which was the most important reason among all other groups, ranked only second (78.9%) among respondents preferring exercise-oriented activities, a majority of whom (62.3%) also described relaxation as important. This group of respondents gave comparatively lower ratings than the sample averages to pleasant surroundings, being with the family, and excitement.

In general, a large number of reasons for participating were evaluated as "important" by those recreationists who preferred team sports, and several of these reasons received substantially higher mean-scores and percentages than among the sample as a whole, it therefore being relatively easier than for many other groups to characterize preferences for team sports and to distinguish them from other types of recreational activity preference. In rank order, the most important reasons for participating in team sports were pleasure (80.8% describing this reason as "important"), health and exercise (75.6%), socialization (63.8%), an alternative to work (61.5%), and challenge and excitement (58.1% in both cases). Of these reasons, all but "alternative

to work" distinguished this group from most of the rest, and there was also evidence to suggest a greater importance attached to reasons such as competition, "egoism", community contribution, and recognition among respondents preferring team sports than among the sample as a whole. The reasons negatively associated with a preference for team sports included relaxation, pleasant surroundings, being with the family, and solitude.

As far as preferences for golf are concerned, the five highest-ranked reasons were pleasure (89.3%), relaxation (70.8%), health and exercise (65.8%), pleasant surroundings (61.5%), and socialization (58.9%). Of these reasons, however, only the last two were evaluated as more important by golfers than among the sample as a whole, as were challenge and competition, even though these latter reasons ranked only seventh and eleventh respectively among golfers. Respondents preferring golf gave comparatively low ratings to excitement, commitment, solitude, and recognition.

For downhill skiers, the most important reasons associated with their choice of activity included pleasure (86.5%), health and exercise (65.8%), pleasant surroundings (63.1%), excitement (58.6%), and challenge (56.8%). In terms of distinguishing this group of recreationists from most of the rest, the improvement of skills and knowledge, and egoism also appear to be important elements, while this recreational activity preference was negatively associated with reasons such as relaxation, being with the family, commitment, and community contribution.

Among respondents preferring extractive activities such as hunting and fishing, the following reasons were perceived as most important: pleasure (80.3%), pleasant surroundings (72.5%), relaxation (69.4%), an alternative to work (62.6%), and being with the family (57.6%). Of these, pleasant surroundings and being with the family distinguished this group of recreationists from the sample as a whole, as did solitude and excitement, but health and exercise, socialization, commitment, competition, and recognition were perceived as less important by this group of recreationists than by most others.

Rather like team sports, preferences for camping were characterized by the importance of a larger number of reasons for participating to substantial majorities of the group than among most other groups, and the larger number of reasons which both positively and negatively distinguished this type of activity preference from the sample as a whole (although of course the combination of reasons for preferring camping was different from that combination most closely associated with preferences for team sports). For campers, reasons such as pleasure (87.4%), pleasant surroundings (82.2%), relaxation (81.5%), being with the family (81.5%), and an alternative to work (73.7%) were the most important. With the exception of pleasure, these reasons also served to distinguish preferences for camping, as did solitude, even though this reason ranked lower on the list of reasons for participating. Preferences for camping were also characterized by a marked absence of the importance of challenge, as well as other reasons such as the improvement of skills and knowledge, commitment, "egoism", competition, and recognition.

Four reasons for participating ranked highly among respondents expressing a preference for self-propelled activities, these being pleasure (90.3%), pleasant surroundings (73.4%), health and exercise (67.7%), and relaxation (65.6%). In addition, solitude was of above-average importance to this group of recreationists, but beyond this, and rather like passive activities, preferences for self-propelled activities are best described in negative terms. Thus, self-propelled activities were negatively associated with reasons such as an alternative to work, being with the family, excitement, commitment, "egoism", community contribution, competition, recognition and, especially, socialization, this last reason receiving the lowest mean-score and percentage among self-propelled recreationists than among any other group.

Finally recreationists preferring mechanized activities viewed pleasure, an alternative to work, and relaxation as the most important reasons for participating (described as "important" by 83.5%, 65.1%, and 64.8% of this group respectively). Challenge and excitement were also of somewhat higher importance to this group than to most others, while the opposite was the case for two reasons, namely commitment, and health and exercise.

c) Results : The choice of recreational activities

An alternative but complementary perspective on the data shown in Tables 21 through 23 and described in the preceding section is to

identify those reasons which fail to discriminate between recreational activity preferences, and those which do discriminate, after which the types of recreational activity most and least likely to contribute to their fulfillment may be identified. Thus, as far as the first aspect is concerned, pleasure did not discriminate between recreational activity preferences, as it was evaluated as the single most important reason for participating among all but one of the activity preference groups, and was ranked second in the exceptional case. Similarly, but at the opposite end of the scale, recognition failed to discriminate and was evaluated as the least important reason for participating among all but two preference groups.

Beyond these general consistencies, however, each reason for participating may be viewed as being fulfilled to a greater or lesser extent through the medium of the different types of recreational activity. Following the rank-order with which each reason was evaluated as "important" by the sample as a whole, a number of brief summary comments may be made. Camping, golf, creative-cultural, and social activities are the best means of achieving relaxation, whereas team sports and downhill skiing were least frequently associated with relaxation. Respondents evaluating health and exercise as important were most likely to choose exercise-oriented activities or team sports, but least likely to choose creative-cultural or passive activities. Generally, an alternative to work was a poor discriminator between activity preferences, although camping was most frequently and positively

associated with this reason, while the opposite was true for passive activities. Pleasant surroundings were least important to recreationists preferring team sports but, as might be expected, most important to those preferring recreational activities classified as extra-urban resource-oriented (hunting and fishing, camping, and self-propelled activities), although the mechanized activities group was an exception in this case.

Turning to the five reasons evaluated as important by between forty and fifty percent of the sample as a whole, socialization was positively related to preferences for social activities, team sports, and golf, but was viewed comparatively negatively by recreationists preferring creative-cultural, extractive and, especially, self-propelled activities. An opportunity for being with the family is best fulfilled in camping, but beyond this does not vary to any substantial extent between other types of recreational activity preference. Similarly, the improvement of skills and knowledge varies comparatively little between activity-preference groups, with the exception of creative-cultural activities, for which it is an outlet, and camping, for which this reason is unimportant. Team sports and downhill skiing appear to be the most appropriate outlets for challenge and excitement; recreationists seeking some form of challenge would be least likely to choose social, passive, or self-propelled activities; those seeking excitement would be unlikely to participate in creative-cultural, and especially passive activities.

As far as the remaining six reasons for participating are concerned,

there were relatively few important differences between recreational activity-preference groups, largely because these reasons were generally evaluated as least important among the sample as a whole. The only significant exceptions were as follows: commitment was most commonly expressed in the preference for creative-cultural activities; competition in team sports but not in camping, creative-cultural, passive, or self-propelled activities; and solitude in passive and in extra-urban resource-oriented activities.

Activity Preferences and Dimensions of Reasons for Participating

Associations between classes of recreational activity preference and the "challenge," "relaxation", and "socialization" dimensions are shown in Tables 24, 25 and 26 respectively. In these cases, activity preferences are treated as dependent variables, and the interpretations are based on the extent to which the frequency of each activity listed increased, decreased, or remained the same with the increasing importance of the total sum of reasons constituting the dimensions.

It can be seen in Table 24 that the preference for team sports clearly increased with increasing importance of "challenge", while preferences for passive activities, camping, and self-propelled activities declined. The trends were not so well-defined for the remaining seven groups of activity, although the data did suggest some influence of "challenge" on creative-cultural activities, downhill skiing, and mechanized activities. The "challenge" dimension did not

appear to be associated with preferences for social, exercise-oriented, or extractive activities, or with golf.

As far as the "relaxation" dimension is concerned, there is evidence in Table 25 to suggest that preferences for extractive activities and, especially, camping, were positively motivated by the desire to relax, as were preferences for golf, and creative-cultural and mechanized activities, although rather more tenuously in these latter cases. Exercise-oriented activities and team sports were clearly associated in a negative direction, while the remainder of the activity-preference groups were not clearly related in either a positive or a negative fashion.

Positive associations emerged between the "socialization" dimension and social activities, team sports, golf, and camping (Table 26). This dimension was negatively associated with preferences for creative-cultural, passive, exercise-oriented, and self-propelled activities, but was not related to the remaining groups of recreational activity preference.

The following conclusions may be drawn about relationships between recreational activity preferences and dimensions of reasons for participating in the favourite recreational activity. Creative-cultural activities represent an outlet for certain aspects of challenge and relaxation, while socialization is generally regarded negatively. Social activities are related, as would be expected, to the perceived importance of socialization, but the dimensions of challenge and relaxation do not exert a strong influence. Passive activities are best defined in

negative terms as far as the three dimensions are concerned: there was little if any association between this group of preferences and the group of reasons constituting the relaxation dimension, while the two remaining dimensions exerted a negative influence on the preference for passive activities. It is also worth noting at this stage that while each of these three groups of activities was defined as a sub-set of "relatively passive" urban recreational activities, they exhibited some marked differences when examined from the general perspective of dimensions of reasons for participating.

Team sports were strongly associated with the importance of challenge and socialization, while relaxation was viewed as unimportant. Exercise-oriented activities shared this last characteristic with the preference for team sports, but differed from the latter in that respondents preferring exercise-oriented activities rated socialization as comparatively unimportant, and did not appear to be influenced by challenge as a reason for participating.

As far as golf was concerned, both relaxation and socialization exerted a positive effect on preferences, but challenge did not. Downhill skiing, in contrast, was best characterized by the positive importance of challenge, and the absence of any recognizable effect either of the socialization or relaxation dimensions, while the only dimension of clear relevance to extractive activity preferences was relaxation.

TABLE 24

REVISED CLASSIFICATION:
RECREATIONAL ACTIVITY PREFERENCES AND
IMPORTANCE OF THE "CHALLENGE" DIMENSION

<u>ACTIVITY PREFERENCE</u>	<u>IMPORTANCE OF "CHALLENGE"</u>				
	<u>Not at all</u>	<u>Not very</u>	<u>Somewhat</u>	<u>Very</u>	<u>Total</u>
	<u>Important</u>	<u>Important</u>	<u>Important</u>	<u>Important</u>	
	%	%	%	%	%
Creative-Cultural	4.4	5.0	6.7	4.8	5.2
Social	5.3	5.8	5.2	6.0	5.6
Passive	10.7	7.1	5.2	1.8	6.0
Exercise-oriented	27.2	25.5	20.6	25.2	24.7
Team sports	5.0	9.5	16.5	24.3	14.4
Golf	5.0	6.0	5.2	4.6	5.2
Downhill skiing	2.0	5.4	8.2	6.9	5.7
Extractive	8.8	8.9	7.4	7.6	8.1
Camping	14.3	10.4	9.1	4.9	9.4
Self-propelled	6.6	5.4	4.3	2.5	4.6
Mechanized	4.8	5.6	7.4	6.3	6.1
Total (1947)	(456)	(463)	(461)	(567)	
Chi-square = 177.47; d.f.=33; p .0001					

TABLE 25

REVISED CLASSIFICATION:
RECREATIONAL ACTIVITY PREFERENCES AND
IMPORTANCE OF THE "RELAXATION" DIMENSION

<u>ACTIVITY PREFERENCE</u>	<u>IMPORTANCE OF "RELAXATION"</u>			
	Low %	Medium %	High %	Total %
Creative-Cultural	4.2	5.9	5.6	5.2
Social	5.6	4.8	6.2	5.6
Passive	6.4	6.1	5.5	5.9
Exercise-oriented	28.2	24.8	20.9	24.4
Team sports	17.7	13.9	11.3	14.2
Golf	4.9	5.5	5.6	5.3
Downhill skiing	5.9	7.2	4.0	5.5
Extractive	7.0	8.1	9.7	8.4
Camping	4.3	8.9	13.8	9.3
Self-propelled	4.3	5.9	3.7	4.5
Mechanized	5.3	5.9	7.0	6.1
Total	(674)	(541)	(804)	(2019)

Chi-square = 82.85; d.f. = 22; p .0001

TABLE 26

REVISED CLASSIFICATION:
RECREATIONAL ACTIVITY PREFERENCES AND
IMPORTANCE OF THE "SOCIALIZATION" DIMENSION

<u>ACTIVITY PREFERENCE</u>	<u>IMPORTANCE OF "SOCIALIZATION"</u>			
	Low %	Medium %	High %	Total %
Creative-Cultural	6.5	6.1	3.0	5.1
Social	4.4	3.8	8.3	5.7
Passive	8.9	6.1	3.4	6.0
Exercise	28.1	26.5	20.4	24.7
Team sports	9.3	15.0	17.8	14.2
Golf	3.3	4.8	7.2	5.2
Downhill skiing	5.9	6.7	4.4	5.6
Extractive	8.7	8.7	7.7	8.3
Camping	6.4	9.7	11.6	9.3
Self-propelled	8.2	3.8	1.8	4.5
Mechanized	6.4	4.3	7.1	6.0
Total	(643)	(586)	(732)	(1961)
Chi-square = 139.87; d.f. = 22; p .0001				

The preference for camping was strongly affected by the importance of all three dimensions, positively in the cases of relaxation and socialization, but negatively in the case of challenge. Self-propelled activities are best characterized in terms of the unimportance of challenge and socialization, and there was no apparent effect of the relaxation dimension. Finally, mechanized activities were seen to be both challenging and relaxing, but did not appear to be associated with the socialization dimension.

Activity Preferences and the Satisfaction of Needs

a) Data presentation and interpretation

In Table 27, the eight statements describing needs which are satisfied by participation in the favourite recreational activity are listed in rank-order of mean-scores calculated from responses among the sample as a whole (Never = 0; Sometimes = 1; Often = 2). Thus, on average, all eight needs were evaluated as being satisfied "sometimes" to "often". The table also shows, however, that mean-scores, and therefore the frequency with which specific needs were satisfied, varied between sub-groups of the sample defined according to their recreational activity preferences.

The data in Table 28 show the proportion of the whole sample, and of each activity-preference group, who reported that each of the needs was

satisfied "often" by participation in their favourite recreational activity, these needs being listed, as in Table 27, in rank-order of response among the whole sample. Minor but unimportant variations in rank-orders between the two tables should be noted.

As in the case of relationships between activity preferences and reasons for participating, an additional table comparable to Table 15 in Phase I of the report, in which recreational activity preferences were treated as dependent variables, was not prepared. A summary table of needs which distinguish between activity-preference groups is presented, however, in Table 29.

Identical guidelines for the interpretation of the data are followed here as were used with respect to the influence of reasons for participating on recreational activity preferences; these will not be restated here. As before, an attempt is made to identify those needs most frequently satisfied by participation in each type of recreational activity, the needs which best distinguish between activity-preference groups, and the types of recreational activity most conducive to the satisfaction of each need.

b) Results : preferences and the satisfaction of needs

Respondents who preferred creative-cultural types of activity reported the following needs as being satisfied most frequently by their choice of recreational pursuit: "a sense of accomplishment" (79.4% of this group reporting "often": Table 28), "helps relax" (77.4%), "try new

things" (62.3%), "places pleasing" (61.9%), and "increases knowledge" (60.4%). In addition, three of these needs were reported as being satisfied "often" by larger proportions of respondents preferring creative-cultural activities than by most other activity-preference groups. These needs serve, therefore, to distinguish this group of respondents from the sample as a whole, namely "increases knowledge", "try new things" and, especially, "a sense of accomplishment", which was not only the most frequently satisfied need among this group of respondents but was also a need significantly more frequently satisfied by participation in creative-cultural activities than in any of the other classes of recreational activity. Creative-cultural activities were also distinguished from the rest by the comparatively less frequent satisfaction of three needs, which also ranked lowest for this group of respondents, namely "helps stay healthy", "socialize with others", and "physically challenging".

Only two needs were reported as being satisfied "often" by a majority of respondents preferring social activities, these being "helps relax" (65.3%) and "socialize with others" (64.2%). Only the latter, however, distinguished social activity preferences from most other types of activity, since the need for relaxation, being of high importance to most if not all types of activity, generally failed to distinguish between recreational activity preferences. Social activities resembled creative-cultural preferences in terms of the less frequent satisfaction of needs such as "helps stay healthy" and "physically challenging", but

TABLE 27
REVISED CLASSIFICATION: MEAN SCORES FOR
"SATISFACTION OF NEEDS" STATEMENTS

<u>Statement</u>	<u>Sample</u>	<u>Creative- Cultural</u>	<u>Social</u>	<u>Passive</u>	<u>Exercise</u>	<u>Team Sports</u>	<u>Golf</u>	<u>Downhill Skiing</u>	<u>Hunting & Fishing</u>	<u>Camping</u>	<u>Self- Propelled</u>	<u>Mechan- ized</u>
Helps relax	1.69	1.75	1.64	1.71	1.69	1.50	1.77	1.65	1.81	1.88	1.72	1.69
Places pleasing	1.64	1.58	1.52	1.46	1.58	1.45	1.79	1.80	1.75	1.81	1.84	1.77
Helps stay healthy	1.61	1.21	1.31	1.02	1.80	1.79	1.60	1.76	1.57	1.60	1.83	1.60
Sense of accomplishment	1.49	1.79	1.44	1.32	1.47	1.61	1.53	1.61	1.40	1.42	1.53	1.50
Socialize with others	1.44	1.17	1.61	1.08	1.37	1.74	1.65	1.51	1.35	1.50	1.20	1.40
Physically challenging	1.42	0.90	1.06	0.65	1.61	1.72	1.39	1.75	1.42	1.34	1.69	1.44
Increases knowledge	1.36	1.58	1.28	1.57	1.24	1.18	1.14	1.19	1.60	1.54	1.47	1.44
Try new things	1.33	1.60	1.39	1.16	1.48	1.28	1.12	1.43	1.36	1.49	1.38	1.39

TABLE 28
REVISED CLASSIFICATION : PERCENT RESPONDING "OFTEN"
TO "SATISFACTION OF NEEDS" STATEMENT

<u>Statement</u>	<u>Sample</u>	<u>Creative-</u>		<u>Social</u>	<u>Passive</u>	<u>Exercise</u>	<u>Team</u>	<u>Downhill</u>		<u>Hunting</u> &	<u>Self - Mechan-</u>	
		<u>Cultural</u>	<u>Cultural</u>					<u>Skiing</u>	<u>Fishing</u>		<u>Camping</u>	<u>Propelled</u> <u>ized</u>
Helps relax	71.6	77.4	77.4	65.3	72.7	71.6	55.6	76.6	81.6	89.0	73.7	70.7
Helps stay healthy	66.3	42.1	42.1	42.1	32.3	81.0	81.7	62.5	59.0	62.4	83.2	63.9
Places pleasing	65.4	61.9	61.9	52.6	50.4	59.8	49.6	79.6	75.9	81.1	84.2	77.2
Sense of accomplishment	52.4	79.4	79.4	46.9	40.0	49.5	61.9	53.7	43.8	46.0	57.9	51.7
Physically challenging	51.6	24.3	24.3	26.1	13.9	63.6	74.0	44.0	49.4	38.8	70.5	49.6
Socialize with others	49.8	27.2	27.2	64.2	30.6	44.7	75.5	67.9	39.3	51.6	26.9	42.1
Increases knowledge	42.2	60.4	60.4	36.3	59.8	35.0	26.7	26.9	62.6	54.7	49.5	47.1
Try new things	40.2	62.3	62.3	43.2	27.3	35.7	34.5	24.5	39.6	51.1	44.2	43.7

TABLE 29
SUMMARY OF RELATIONSHIPS BETWEEN
ACTIVITY PREFERENCES AND THE SATISFACTION OF NEEDS

<u>Statement</u>	<u>Creative-</u>			<u>Team</u>		<u>Downhill</u>		<u>Hunting</u>		<u>Self- Mechan-</u>
	<u>Cultural</u>	<u>Social</u>	<u>Passive</u>	<u>Exercise</u>	<u>Sports</u>	<u>Golf</u>	<u>Skiing</u>	<u>Fishing</u>	<u>Camping</u>	<u>Propelled</u>
Helps relax					-			+	+	
Places pleasing		-	-		-	+	+	+	+	+
Helps stay healthy	-	-	-	+	+		+			+
Sense of accomplishment	+		-							
Socialize with others	-	+	-		+	+		-		-
Physically challenging	-	-	-	+	+		+		-	+
Increases knowledge	+		+		-	-	-	+	+	
Try new things	+		-		-	-			+	+

+ Above-average mean-score (Table 27) or percentage (Table 28)

- Below-average mean-score (Table 27) or percentage (Table 28)

in this case, in addition, the need "places pleasing" was satisfied less frequently than among all but one other group of recreational activity.

As far as passive activities are concerned, the need most frequently satisfied was relaxation (72.7%), followed by "increases knowledge" (59.8%), this latter also serving to distinguish passive activity preferences from all other groups with the exception of creative-cultural activities. An examination of Tables 27 through 29 shows that preferences for passive activities were also distinguished from the rest in terms of the relatively less frequent fulfillment of the remaining six needs.

Given their relatively "active" orientation, it is not surprising to find that preferences for exercise-oriented activities, team sports, downhill skiing, and self-propelled activities exhibit several marked similarities in terms of the frequency with which specific needs were satisfied: consequently, these four groups are best treated together. In all four cases, for example, the need "helps stay healthy" ranked first or second, and "physically challenging" ranked among the top four. Indeed, a comparison of mean-scores and percentages (summarized in Table 29) shows that these two needs served clearly to distinguish exercise-oriented and self-propelled activities, team sports, and downhill skiing from the remaining seven classes of activity, if not from each other. At the same time several important differences between the four groups should also be recognized. For both downhill skiing and self-propelled activities, the need "places pleasing" was reported as

most frequently being satisfied, whereas this need was of lesser importance to exercise-oriented recreationists, and in fact was negatively associated with preferences for team sports. Relaxation was positively associated with preferences for downhill skiing, exercise-oriented, and self-propelled activities, but negatively with team sports. Finally, there was a clear difference, at least between team sports and self-propelled activities, in terms of the more frequent satisfaction of the need "to socialize with others" among respondents preferring the former, and its substantially less frequent satisfaction among respondents preferring the latter.

The satisfaction of two needs distinguished preferences for golf from most other types of activity, these being "places pleasing" (79.6%) and "to socialize with others" (67.9%). Two other needs were reported as being frequently satisfied among golfers, namely "helps relax" and "helps stay healthy" (62.5%), but these were not distinguishing characteristics, in contrast to "increases knowledge" and "try new things", both of which were reported as being satisfied less frequently among golfers than among other recreationists.

As far as camping, extractive, and mechanized activities are concerned, there were again sufficient similarities to warrant their treatment together. All three types of activity, for example, shared the importance of relaxation and "places pleasing" as needs to be satisfied, these two ranking first or second in importance in all three instances, and with the exception of the need "helps relax" in the case of

mechanized activities, distinguished these types of activity from most of the rest. The need "increases knowledge" was also shared as a positive distinguishing characteristic by campers and recreationists preferring extractive activities, but not by mechanized recreationists. Extractive activity preferences were also further distinguished by the comparatively low frequency with which the need "to socialize with others" was satisfied, and camping by the lower frequency of satisfaction of the need "physically challenging".

c) Results : recreational activities as outlets for the satisfaction of needs

As in the case of relationships between recreational activity preferences and reasons for participating in the favourite activity, an alternative but complementary perspective on the data shown in Tables 27 through 29 is possible, namely to identify types of recreational activity which, on the basis of responses to the survey, may be viewed as the most and least appropriate outlets for the satisfaction of specific needs. For this purpose one reads across and compares data in the table rows, rather than down the columns.

Respondents seeking relaxation were more likely to choose camping or extractive activities, but would tend less frequently to choose team sports as a recreational activity. The desire to stay healthy and to attain a physical challenge were both successfully expressed in exercise-oriented and self-propelled activities, in team sports, and

downhill skiing, whereas, as would be expected, the three categories of indoor leisurely activity (creative-cultural, social, and passive activities) may be viewed as inappropriate outlets for these needs.

Also, as one would expect, the desire to experience pleasing places is one which is best satisfied among all types of outdoor recreational activity, and especially in downhill skiing, camping, and self-propelled activities, but not in indoor leisurely activities or team sports.

Team sports, golf, and social activities appear to represent the most appropriate outlets to satisfy the need "to socialize with others", while the opposite is true of the remaining indoor leisurely activities, and self-propelled outdoor recreational activities which, judging by these data as well as those concerning reasons for participating, tend to be more solitary in orientation.

Finally, "a sense of accomplishment" is most frequently satisfied in creative-cultural activities and least frequently in passive activities; the need "to increase knowledge" finds an outlet in extractive, creative-cultural, and passive activities but not in the more "active" pursuits such as team sports, golf, or downhill skiing; and "trying new things" is best accomplished in creative-cultural activities and camping, but not in passive activities or golf.

d) Other comments

Insofar as comparisons are both possible and appropriate, some clear consistencies may be observed regarding relationships between activity

preferences and reasons for participating, and activity preferences and the satisfaction of needs. Among the sample as a whole, the generally high importance attached to reasons for participating such as relaxation, health and exercise, and pleasant surroundings was consistent with the generally high frequency with which needs such as "helps relax", "helps stay healthy", and "places pleasing" were satisfied.

Similar consistencies may also be observed within sub-groups of the sample defined according to their recreational activity preferences, and while an exhaustive review is not necessary, some examples follow to establish this finding. The high importance attached to socialization, and health and exercise as reasons for participating in team sports was consistent with the frequency with which the corresponding needs were satisfied. Similarly, the importance of skills and knowledge among creative-culturally-oriented respondents was consistent with the unusually high frequency with which the corresponding need was satisfied among this group. From another perspective, the apparent failure of self-propelled activities to fulfill a need to socialize with others cannot be attributed to the lack of high-quality facilities or resources for these types of activities, but rather to the fact that this constitutes one of the lowest-ranked reasons for participating among this group of recreationist, and that of all recreational groups, self-propelled recreationists viewed socialization as least important.

At the same time, however, two types of inconsistency between the two sets of findings should also be recognized. In some instances, the

importance of a specific reason was not matched by success in the frequency of satisfaction of the corresponding need. This was the case, for example, among respondents preferring passive activities, 42.1% of whom evaluated socialization as "important" but only 30.6% of whom reported this need as being satisfied "often". However, examples of this type of inconsistency were rare. Occurring rather more often was the opposite (and from a management perspective, more desirable) type of inconsistency, in which the frequency of satisfying a need was greater than the importance attached to the corresponding reason for participating. Here, downhill skiing provides a representative set of examples: in the 54.1% of this group of recreationists regarded relaxation as important but 66.7% reported this need as satisfied "often"; 65.8% viewed health and exercise as "important" but 76.9% said downhill skiing "often" fulfilled the need of helping to stay healthy; and 63.1% saw pleasant surroundings as "important" compared with 81.5% who reported "places pleasing" as an often-satisfied need. On balance, however, the consistencies between the two sets of data outweigh the inconsistencies.

Finally, as observed in Phase I, it is a combination of needs and motivations which is associated with preferences for types of recreational activity, and which distinguishes between these types, rather than single specific needs or motivations alone. Thus, for example, while it was possible to observe some strong inconsistencies in relation to the needs for health and exercise, and physical challenge in the case of team sports, downhill skiing, and self-propelled and

exercise-oriented activities, these groups also differed with regard to pleasant surroundings, relaxation, and socialization.

Socio-Economic Variations in Activity Preferences

a) Data presentation and interpretation

Data depicting the influence of five socio-economic variables (age, sex, education, income, and type of household) on recreational activity preferences, in which the latter are treated as dependent variables, are shown in Tables 30 through 34. As far as the ordinal variables are concerned (age, education, and income), it is possible to identify activity preferences which increased or declined in the frequency with which they were listed as the favourite recreational activity by groups defined according to successively higher categories of these variables. Thus, for example, a clear decline in the preference for downhill skiing among successively older age-groups is apparent in Table 30, and a clear increase in the preference for self-propelled outdoor recreation activities from the least-educated to the best-educated sub-groups of the sample may be seen in Table 32.

Unfortunately, however, few of the trends are as consistent for other activity preferences as for these examples. Furthermore, such trends cannot by definition, be identified in the case of the two nominal socio-economic variables, sex and type of household. It is therefore

desirable, in the case of the ordinal variables, to complement the interpretation of trends with the identification of the most and least preferred recreational activities within each sub-group of the sample, and to rely on the latter procedure alone in the case of the nominal variables.

b) Age

An examination of age variations in activity preferences (Table 30) shows one intriguing characteristic, namely the occasionally anomalous set of preferences displayed by the oldest group of respondents: while the preference for exercise-oriented activities and team sports generally declined with age, this trend was reversed among respondents aged over 64; similarly, the preference for golf and extractive activities generally increased with age, but the trend was again reversed among the oldest age-group. There were also certain activities for which a linear relationship with age did not appear: rather, for activities such as camping, and extractive, self-propelled, and mechanized activities, the middle age groups were more likely to express a preference.

The three types of recreational activity most frequently preferred by the youngest group of respondents were exercise-oriented activities (31.1%), team sports (23.7%), and downhill skiing (8.2%). This group was least likely to prefer golf (1.8%), self-propelled activities (2.1%), and extractive activities (3.7%).

Among the second-youngest age-group (25 to 34), the two most frequently preferred groups of activity were again exercise-oriented (28.6%) and team sports (16.5%). For this group, however, camping represented the third most popular type of activity (9.4%), while ranking lowest in popularity were golf (3.0%) and social and creative-cultural activities (4.6% and 4.9% respectively). Respondents aged between 35 and 44 also expressed the strongest preference for exercise-oriented activities (22.8%), but in this case camping was the second preference (14.6%), taking a slight precedence over team sports (13.2%). The least-preferred activities for this sub-group included passive, social, and creative-cultural activities (4.5%, 4.8%, and 5.1% respectively), and downhill skiing (5.1%).

Among respondents aged between 45 and 64, exercise-oriented activities ranked first in preference (19.6%), followed by extractive activities (15.1%) and golf (12.0%). This group of respondents was least likely to prefer downhill skiing (2.8%), and self-propelled and mechanized activities (5.2% in both cases). Among the oldest age-group, exercise-oriented activities ranked first in preference (23.7%), while passive (15.3%) and social activities (13.7%) ranked second and third. Golf was also mentioned by a sizable proportion of this group (11.5%). No members of this group listed downhill skiing as their favourite activity, and comparatively few expressed a preference for self-propelled (2.3%) or mechanized activities (3.8%).

In summary, some important effects of age on recreational activity preferences emerged from this analysis. Perhaps because of the large number and range of pursuits included within this category, exercise-oriented activities consistently appeared as the most-preferred type, although generally declining in preference with age. Other activities for which preferences declined with advancing age included team sports and downhill skiing, while the reverse was true for social and passive activities, and for golf. Preferences for extractive, self-propelled, and mechanized activities, and for camping, were highest among the intermediate age-groups, while preferences for creative-cultural activities did not appear to be influenced by respondents' age.

c) Sex

In terms of comparing the frequency distributions shown in Table 31, marked differences occurred in recreational activity preferences according to sex, with the exceptions of downhill skiing, camping, and self-propelled and mechanized activities, for which approximately equal proportions of males and females expressed a preference. Beyond these instances, however, larger proportions of males than females preferred team sports, golf and, especially extractive activities, whereas larger proportions of females than males preferred creative-cultural, social, passive, and exercise-oriented activities.

TABLE 30

AGE VARIATIONS IN ACTIVITY PREFERENCES

<u>ACTIVITY</u> <u>PREFERENCE</u>	<u>AGE</u>					<u>Total</u>
	<u>25</u>	<u>25-34</u>	<u>35-44</u>	<u>45-64</u>	<u>65+</u>	
	%	%	%	%	%	%
Creative-Cultural	5.0	4.9	5.1	6.6	6.9	5.4
Social	6.6	4.6	4.8	6.8	13.7	6.1
Passive	4.7	5.6	4.5	9.7	15.3	6.8
Exercise-oriented	31.1	28.6	22.8	19.6	23.7	25.8
Team sports	23.7	16.5	13.2	7.3	7.6	14.8
Golf	1.8	3.0	5.9	12.0	11.5	5.8
Downhill skiing	8.2	7.2	5.1	2.8	0.0	5.6
Extractive	3.7	7.9	9.0	15.1	8.4	8.9
Camping	6.3	9.4	14.6	9.7	6.9	9.6
Self-propelled	2.1	5.9	6.2	5.2	2.3	4.8
Mechanized	6.6	6.3	8.7	5.2	3.8	6.4
Total	(379)	(695)	(355)	(424)	(131)	(1984)

In terms of the rank-order of preferences among males and females, exercise-oriented activities and team sports ranked first and second in both cases, despite the differences in percentages noted above. Major differences occurred however, in that males gave comparatively high rankings to extractive activities (ranked last among females) and golf, whereas females gave comparatively high rankings to passive and, especially, social activities.

d) Education

As before, exercise-oriented activities ranked first in preference among all sub-groups defined according to educational attainment (Table 32), although there was a recognizable trend such that this preference increased in frequency with increasing education. Other types of activity preference positively associated with education included passive activities, downhill skiing, and self-propelled activities whereas preferences for camping, extractive, and mechanized activities tended to be more prevalent among respondents with fewer years of education.

Some anomalous relationships may also be observed in Table 32. For instance, social activities were preferred somewhat more frequently by respondents with less than a high school education, but thereafter equally among the remaining groups defined according to education. Insofar as differences were recognizable, golf was preferred slightly more frequently by the two groups with intermediate levels of education, rather than by the best-and least-educated groups. Team sports ranked

TABLE 31

SEX VARIATIONS IN ACTIVITY PREFERENCES

<u>ACTIVITY PREFERENCE</u>	<u>SEX</u>		
	<u>Male</u> %	<u>Female</u> %	<u>Total</u> %
Creative-Cultural	3.9	8.2	5.4
Social	4.5	9.1	6.1
Passive	5.6	9.1	6.7
Exercise-oriented	21.5	33.4	25.5
Team sports	17.3	10.3	14.9
Golf	7.4	2.7	5.8
Downhill skiing	5.6	5.9	5.7
Extractive	13.0	1.1	9.0
Camping	9.5	9.7	9.5
Self-propelled	5.2	4.4	4.9
Mechanized	6.6	6.3	6.5
Total	(1297)	(662)	(1959)

TABLE 32

EDUCATIONAL VARIATIONS IN ACTIVITY PREFERENCES

<u>ACTIVITY</u> <u>PREFERENCE</u>	<u>EDUCATION</u>				
	<u>Less than</u>	<u>High</u>	<u>Some Post-</u>	<u>University</u>	<u>Total</u>
	<u>High School</u>	<u>School</u>	<u>Secondary</u>		
	%	%	%	%	%
Creative-Cultural	4.8	6.0	5.1	6.0	5.4
Social	8.5	5.4	5.3	5.4	6.1
Passive	5.9	4.6	7.2	9.9	6.9
Exercise-oriented	22.9	25.3	24.5	31.9	25.6
Team sports	12.6	19.0	15.3	11.3	14.7
Golf	5.4	6.3	8.2	3.9	8.9
Downhill skiing	3.1	5.2	5.8	9.0	5.6
Extractive	15.9	6.3	8.2	3.9	8.9
Camping	11.8	11.4	9.6	5.7	9.8
Self-propelled	1.5	3.5	5.5	9.0	4.8
Mechanized	7.6	7.1	6.9	3.3	6.5
Total	(459)	(368)	(779)	(335)	(1941)

second in preference among all groups but the one characterized by less than high school education (for whom extractive activities took slight precedence), and were most likely to be preferred by respondents with a high school level of education. The choice of creative-cultural activities did not appear to be influenced strongly by educational attainment (although it may well be, of course, that preferences of the specific activities constituting this class vary across education groups).

e) Income

Generally speaking, the income variable acted as a poor predictor of recreational activity preferences. Differences between groups defined according to income were smaller than in the cases of the socio-economic variables examined thus far; also, few meaningful trends are apparent in Table 33. Recognizable increases in preferences for golf and downhill skiing with increases in income emerged, as did a decline in the preference for creative-cultural activities, while preferences for team sports and camping were strongest among the middle-income groups. Even in these cases, however, differences in percentage points between extremes were insufficiently large to conclude that income exerts a strong effect on recreational activity preferences, at least as they are classified here.

TABLE 33

INCOME VARIATIONS IN ACTIVITY PREFERENCES

<u>ACTIVITY PREFERENCE</u>	<u>INCOME</u>					<u>Total</u>
	<u>\$10,000</u>	<u>\$10,000-</u>	<u>\$20,000-</u>	<u>\$30,000-</u>	<u>\$40,000+</u>	
	%	<u>\$20,000</u> %	<u>\$30,000</u> %	<u>\$40,000</u> %	%	%
Creative-Cultural	8.5	7.8	5.1	5.2	3.7	5.5
Social	15.5	5.4	3.7	5.2	6.9	6.1
Passive	12.7	7.5	4.9	3.9	8.5	6.8
Exercise-oriented	23.2	31.0	23.8	25.5	24.7	26.0
Team sports	9.2	13.2	18.9	13.7	13.9	14.9
Golf	3.5	3.9	6.4	6.4	6.9	5.8
Downhill skiing	4.2	4.4	4.9	6.2	7.1	5.6
Extractive	10.6	7.0	9.2	11.1	7.9	8.9
Camping	3.5	9.3	13.8	10.1	7.6	9.7
Self-propelled	2.1	3.9	4.7	7.0	4.8	4.9
Mechanized	7.0	6.7	4.5	5.9	8.1	6.4
Total	(142)	(387)	(487)	(388)	(567)	(1971)

TABLE 34

HOUSEHOLD-TYPE VARIATIONS IN ACTIVITY PREFERENCES

<u>ACTIVITY PREFERENCE</u>	<u>TYPE OF HOUSEHOLD</u>				<u>Total</u>
	<u>Couple with Children</u>	<u>Couple with No Children</u>	<u>Single Parent Family</u>	<u>One or More Unrelated</u>	
%	%	%	%	%	
Creative-Cultural	3.7	8.7	5.2	5.2	5.3
Social	4.2	6.7	14.6	7.4	5.9
Passive	5.1	7.6	8.3	9.1	6.6
Exercise-oriented	24.6	20.2	36.5	32.1	25.6
Team sports	16.5	13.5	12.5	13.2	14.9
Golf	6.4	7.6	1.0	3.8	5.9
Downhill skiing	4.6	5.0	2.1	10.7	5.7
Extractive	10.9	11.1	1.0	3.3	9.0
Camping	12.7	8.7	4.2	4.4	9.7
Self-propelled	4.8	4.8	4.2	5.2	4.8
Mechanized	6.7	6.1	10.4	5.5	6.5
Total	(984)	(460)	(96)	(364)	(1904)

f) Type of household

With the exceptions of team sports, passive, and self-propelled activities, for which no major differences emerged, the various categories of recreational activity preference tended to be associated more closely with one and occasionally two types of household than with the others (Table 34). Thus preferences for creative-cultural activities were expressed more frequently by couples with no children, as was the preference for golf, this latter especially so in comparison with respondents from single-parent families. These respondents, instead, were more likely than others to prefer social and mechanized activities and shared an unusually high preference for exercise-oriented activities with respondents in households containing one or more unrelated adults. Downhill skiing also appealed more frequently to this last group of respondents, whereas it was couples who were more likely to prefer extractive activities and camping, and the presence of children in the family also exerted an influence on camping.

As before, however, this emphasis on differences between groups should not be allowed to obscure consistencies such as the uniformly highest rank of preference for exercise-oriented activities among all groups regardless of type of household, and the second-place position of team sports among all groups except respondents from single-parent families (for whom social activities ranked second).

g) Summary

The preceding sections have represented an attempt to establish the degree of influence which socio-economic factors exert on recreational activity preferences. In general, significant differences between sub-groups defined on the basis of five socio-economic variables emerged, and the main trends and points of differentiation have been recognized and interpreted. Because of the varying number of categories into which the socio-economic factors were divided, it is not possible in any objective way to specify which of these were most and least closely associated with recreational activity preferences. On the basis of a general assessment, however, it is reasonable to conclude that age and sex acted as the best predictors of preference, income the poorest, while education and type of household occupied an intermediate position between these two extremes.

The attempt to distinguish recreational activity preferences on the basis of variations in socio-economic factors has inevitably demanded an emphasis on differences between groups. Nevertheless, sight should not be lost of several consistencies which have also emerged, most notably in terms of the generally overriding preferences stated for exercise-oriented activities and team sports, and the generally if not uniformly low frequency of preference for other recreational pursuits such as self-propelled or mechanized activities. When allocating recreational resources and developing recreational facilities, therefore, recreation planners and managers should pay equal attention to the

absolute importance of recreational activity preferences, as well as to their relative importance as this characteristic may vary among sub-sections of the population, however defined.

Socio-Economic Variations in Reasons for Participating and the Satisfaction of Needs

Summary results for eighty crosstabulation tables depicting relationships between the five socio-economic variables and the sixteen reasons for participating in the favourite recreational activity are shown in Table 35, while a similar summary of forty crosstabulation tables concerning socio-economic variations in the satisfaction of needs is presented in Table 36. Both summary tables show that socio-economic variables generally acted as poor predictors of reasons for participating and the satisfaction of needs when viewed from the perspective of the sample as a whole, as opposed to specific groups defined according to recreational activity preferences. This was particularly so in the case of the "type of household" variable, for which only five out of twenty-four relationships were significant at an acceptable level of statistical probability, and about which therefore, no meaningful inferences may be drawn. Similarly only eight of the twenty-four with the "income" variable were statistically significant, and of these, no recognizable trend was apparent in five cases.

TABLE 35
SUMMARY OF SOCIO-ECONOMIC VARIATIONS IN
REASONS FOR PARTICIPATING

REASON	SOCIO-ECONOMIC VARIABLES				
	Age	Sex	Education	Income	Household Type
Pleasure	-	n.s.	+	+	n.s.
Health, Exercise	-	F	*	n.s.	n.s.
Relaxation	+	n.s.	*	n.s.	CC,CW
Work alternative	*	n.s.	n.s.	n.s.	CC
Pleasant surroundings	n.s.	n.s.	-	n.s.	n.s.
Socialize	+	F	-	n.s.	n.s.
Skills, knowledge	-	F	*	*	n.s.
Be with family	+	F	-	n.s.	CC,SP
Challenge	-	M	*	*	n.s.
Excitement	-	*	-	n.s.	n.s.
Commitment	*	*	n.s.	n.s.	n.s.
Good at it	-	n.s.	+	*	n.s.
Contribution	+	F	-	n.s.	n.s.
Competition	-	M	n.s.	*	n.s.
Be alone	n.s.	*	n.s.	n.s.	n.s.
Recognition	*	n.s.	n.s.	n.s.	*
+	importance of reason increases with increased in age, education, or income				
-	importance of reason decreases with increases in age, education, or income				
M	% responding "important" higher among males				
F	% responding "important" higher among females				
CC,CW,SP	% responding "important" higher among couple-with-children, couple-without children, and single-parent-family household types				
n.s.	not significant				
*	relationship statistically significant, but no trend apparent				

TABLE 36
SUMMARY OF SOCIO-ECONOMIC VARIABLES IN
SATISFACTION OF NEEDS

<u>STATEMENT</u>	<u>SOCIO-ECONOMIC VARIABLES</u>				
	<u>Age</u>	<u>Sex</u>	<u>Education</u>	<u>Income</u>	<u>Household Type</u>
Helps relax	+	n.s	+	+	n.s
Places pleasing	+	n.s	n.s.	n.s.	n.s
Helps stay healthy	-	n.s.	*	n.s.	n.s.
Sense of accomplishment	-	n.s.	+	n.s.	n.s.
Socialize with others	*	F	-	n.s.	n.s.
Physically challenging	-	n.s.	+	+	n.s.
Increases knowledge	+	*	n.s.	n.s.	n.s.
Try new things	-	F	n.s.	*	SP,U

+ frequency of satisfaction increases with increases in age, education, or income

- frequency of satisfaction decreases with increases in age, education, or income

M frequency of satisfaction higher among males

F frequency of satisfaction higher among females

SP,U frequency of satisfaction higher among single-parent family and one-or-more unrelated household types

n.s. not significant

* relationship statistically significant, but no trend apparent

The variable "education" was rather more closely associated with reasons for participating and the satisfaction of needs than the two aforementioned variables, although again it was difficult to discern meaningful trends in some cases. The importance of pleasure and "egoism" as reasons for participating increased with education, as did the frequency with which the needs "a sense of accomplishment" and "physically challenging" were reported as being satisfied. Increases in educational attainment were negatively related to the perceived importance of pleasant surroundings, socialization, being with the family, excitement, and community contribution as reasons for participating in the favourite recreational activity, and with the satisfaction of the need "to socialize with others".

Some sex differences are also discernable in Tables 35 and 36. Males more frequently than females viewed challenge and competition as important reasons associated with their recreational activity preferences. Females, on the other hand, attached a greater importance than did males to reasons for participating such as health and exercise, socialization, the improvement of skills and knowledge, being with the family, and a contribution to the community. Females also reported needs such as socialization and trying new things, as being satisfied more frequently than did males.

Of the five socio-economic variables examined here, age was most consistently associated with reasons for participating and the satisfaction of needs. In general, as the age of respondents increased,

so did the perceived importance of the following reasons for participating: socialization, being with the family, and community contribution. It was younger rather than older people, however, who tended to view the following reasons as important: pleasure, health and exercise, the improvement of skills and knowledge, challenge, excitement, "egoism", and competition. Age was positively associated with the satisfaction of the "relaxation", "places pleasing", and "increased knowledge" needs, but negatively associated with the "helps stay healthy", "sense of accomplishment", "physically challenging", and "try new things" needs.

MULTI-VARIATE ANALYSIS

a) Data presentation and interpretation

If recreational activity preferences are viewed as the extreme of a complex and interrelated set of factors, it would be unwise to accept at face value the findings described and interpreted thus far. None of the variables examined should be thought of as exerting the sole, or even an independent effect on preferences, unless this can be established by more sophisticated forms of statistical analysis than have been used up to this point. For this reason, a set of multi-variate analysis was conducted: the detailed rationale and procedure for this stage of analysis were outlined in Phase I and need not be repeated here.

Whereas in Phase I the influence of dimensions of reasons for participating in the favourite recreational activity on preferences was examined under controlled conditions of socio-economic factors, in the case of the revised classification, the sixteen specific reasons for participating were used instead. This choice was made as the result of a need to gain a more detailed understanding of reasons for participating than is possible in the context of the dimensions, as well as because of the intrinsic limitations of the dimensions identified in the concluding section of Phase I.

Furthermore, an identical multi-variate analytical procedure was applied to associations between activity preferences and the satisfaction of needs under controlled conditions of socio-economic variables.

Finally, a reverse analysis was also conducted in an attempt to assess the independent influence of socio-economic variables on activity preferences, under controlled conditions of the total of the twenty-four statements related to reasons for participating and the satisfaction of needs.

This stage of analysis resulted in 960 separate crosstabulation tables. Not only is it impossible, therefore, to report on all of these findings in any detail, it is also difficult to summarize them in anything but the most general fashion. Nevertheless, a set of summary tables has been prepared (Tables 37 to 40) in which the following relationships with recreational activity preferences are presented: the independent influence of reasons for participating and the satisfaction of needs (Table 37 and 38 respectively), holding socio-economic variables constant; and the independent effects of socio-economic factors under controlled conditions of reasons for participating (Table 39) and the satisfaction of needs (Table 40). In the appropriate tables, reasons for participating are listed in rank-order of their importance among the sample as a whole, and the statements concerning the satisfaction of needs are listed in rank-order of the frequency of fulfillment among the sample as a whole.

It should be noted that Tables 37 through 40 summarize only the statistical significance of relationships between independent and dependent variables, holding the test variables constant (S = significant; NS = not significant). The summaries should be viewed,

therefore, as only a crude indication of the confirmation or rejection of original two-variable relationships. The statistical significance of a relationship is determined not only by differences in response to the dependent variable between categories of the independent variable, but also by the size of the sample upon which the analysis is based (and this varied markedly between the tables produced at this stage of the analysis). A probability level of .05 was arbitrarily chosen to determine the significance of all relationships, since this is widely used and accepted in social science research.

While the tables provide no evidence of the strength or direction of a relationship, they nevertheless embody a useful summary on the basis of which some inferences may be made. Furthermore, a series of detailed examples is included and interpreted (Tables A4 to A11 see Appendix) in order to provide more detail about the nature of multi-variate relationships, to illustrate the statistical and inferential processes involved, and to lend support to the conclusion that, in general, the results of multi-variate analysis supported previous findings.

b) Results : overview

If one reads down and compares across the columns in Table 37, it can be seen that reasons such as health and exercise, pleasant surroundings, socialization, being with the family, challenge, excitement, competition, solitude, and recognition for the most part exerted an effect on recreational activity preferences independent of socio-economic factors.

These reasons can be evaluated, therefore, as successfully discriminating between preferences for various forms of recreational activity. The discriminating effects of relaxation, the improvement of skills and knowledge, "good at it", and community contribution were less consistent, judging by the number of non-significant relationships, while the effects of pleasure and an alternative to work, if they exist at all, can largely be attributed to simultaneous variations of perceptions of these reasons among sub-groups of the sample defined on the basis of socio-economic variables. It is interesting to note that these last two reasons were described as poor discriminators on the basis of the previous two-variable analysis, and at least in this case, therefore, the multi-variate analysis supports findings reported earlier.

The results summarized in Table 38 show that the needs most consistently associated with activity preferences, independent of socio-economic factors, were "places pleasing", "helps stay healthy", "socialize with others", and "physically challenging". Interestingly, these are clearly consistent with four of the best-discriminating reasons for participating (pleasant surroundings, health and exercise, socialization, and challenge) identified above with reference to Table 37. Less successful as independent discriminators were the remaining four statements concerning the satisfaction of needs, the effects of which disappeared in many cases when the five socio-economic variables were introduced into the analysis.

An examination of Tables 39 and 40 shows that socio-economic variables also exerted influences on recreational activity preferences, independent of the effects of reasons for participating and the satisfaction of needs. This was particularly so, although not in every specific case, of age and sex. Income and type of household were the least successful independent predictors of preference, while education occupied an intermediate position. It is also worth noting that in many instances, socio-economic variables tended to have an effect on preferences only among sub-groups of the sample for whom a reason for participating was "somewhat important" or "important", and among whom a need was satisfied "sometimes" or "often".

There is one particularly intriguing aspect of the data summarized in Table 37, which may have theoretical importance, and which unquestionably suggests practical or management implications; it should be examined in more detail at a later stage on the basis of data collected in the survey but is beyond the scope of the present report. If one reads across the rows instead of down the columns in Table 37, it can be seen that almost all reasons for participating failed to exert an independent influence on activity preference among three sub-groups of the sample, these being respondents aged 65 and over, those with an income of \$10,000 and under, and respondents from single-parent families.

A reasonable interpretation of this finding suggests that for these three groups, situational factors may override any influence that

TABLE 37

SUMMARY OF SIGNIFICANT RELATIONSHIPS: EFFECTS OF REASONS FOR PARTICIPATING
ON ACTIVITY PREFERENCES, EFFECTS OF SOCIO-ECONOMIC VARIABLES CONTROLLED

	Pleasure	Health, Exercise	Relaxation	Work Alternative	Surroundings	Socialization	Knowledge	Family	Challenge	Excitement	Commitment	Good At It	Contribution	Competition	Solitude	Recognition
<u>(AGE)</u>																
Up to 24	NS	S	S	NS	S	S	NS	S	S	S	NS	S	NS	S	S	NS
25 to 34	S	S	S	S	S	S	NS	S	S	S	S	S	S	S	S	S
35 to 44	NS	S	NS	S	S	S	NS	S	S	S	NS	NS	S	S	S	S
45 to 64	NS	S	NS	NS	S	S	NS	S	S	S	NS	NS	NS	S	NS	NS
65 and over	S	S	NS	S	NS	NS	NS	NS	NS	NS	NS	NS	NS	S	NS	S
<u>(SEX)</u>																
Male	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Female	NS	S	S	S	S	S	S	S	S	S	NS	S	S	S	S	S
<u>(EDUCATION)</u>																
Less than high school	S	S	S	S	S	S	S	S	S	S	NS	NS	S	S	S	S
High school	NS	S	S	NS	S	S	NS	S	S	S	NS	S	NS	S	S	S
Post-secondary	NS	S	S	NS	S	S	S	S	S	S	S	S	NS	S	S	S
University	NS	S	NS	NS	S	S	NS	S	S	S	NS	NS	NS	S	S	S
<u>(INCOME)</u>																
Up to \$10,000	NS	NS	S	NS	NS	NS	NS	S	NS	NS	NS	NS	NS	NS	NS	NS
\$10,000 to \$20,000	NS	S	S	NS	S	NS	NS	S	S	S	S	S	NS	S	S	S
\$20,000 to \$30,000	NS	S	S	NS	S	S	NS	S	S	S	NS	S	S	S	S	S
\$30,000 to \$40,000	NS	S	S	NS	S	S	S	S	S	S	NS	S	S	S	S	S
Over \$40,000	NS	S	NS	NS	S	S	S	S	S	S	NS	S	S	S	S	S
<u>(TYPE OF HOUSEHOLD)</u>																
Couple with Children	NS	S	S	S	S	S	S	S	S	S	NS	S	S	S	S	S
Couple, no Children	NS	S	S	NS	S	S	S	S	S	S	NS	S	S	S	S	S
Single parent family	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	S	NS	NS
Unrelated	NS	S	NS	NS	S	NS	NS	S	S	S	NS	S	S	S	S	S

TABLE 38
SUMMARY OF SIGNIFICANT RELATIONSHIPS: ACTIVITY PREFERENCES AND THE
SATISFACTION OF NEEDS, EFFECTS OF SOCIO-ECONOMIC VARIABLES CONTROLLED

	Helps Relax	Places Pleasing	Helps Stay Healthy	Sense of Accomplishment	Socialize With Others	Physically Challenging	Increases Knowledge	Try New Things
<u>(AGE)</u>								
Up to 24	NS	S	S	S	S	S	S	NS
25 to 34	S	S	S	S	S	S	S	NS
35 to 44	S	S	S	NS	S	S	S	S
45 to 64	NS	S	S	NS	S	S	S	S
65 and over	NS	NS	NS	NS	NS	S	NS	NS
<u>(SEX)</u>								
Male	S	S	S	S	S	S	S	S
Female	NS	S	S	S	S	S	NS	S
<u>(EDUCATION)</u>								
Less than high school	S	S	S	S	S	S	S	S
High school	S	NS	S	S	S	S	S	NS
Post-secondary	S	S	S	NS	S	S	S	S
University	NS	S	S	S	S	S	S	S
<u>(INCOME)</u>								
Up to \$10,000	NS	NS	NS	NS	NS	S	NS	NS
\$10,000 to \$20,000	S	S	S	S	S	S	S	NS
\$20,000 to \$30,000	S	S	S	S	S	S	S	S
\$30,000 to \$40,000	NS	S	S	NS	S	S	S	S
Over \$40,000	S	S	S	NS	S	S	S	S
<u>(TYPE OF HOUSEHOLD)</u>								
Couple with Children	S	S	S	S	S	S	S	S
Couple, no Children	S	S	S	S	S	S	S	S
Single parent family	NS	NS	NS	NS	NS	NS	NS	NS
Unrelated	NS	S	S	NS	S	S	NS	NS

TABLE 39
SUMMARY OF SIGNIFICANT RELATIONSHIPS:
ACTIVITY PREFERENCES AND SOCIO-ECONOMIC VARIABLES,
CONTROLLING FOR THE EFFECTS OF REASONS FOR PARTICIPATING

		Pleasure	Health, Exercise	Relaxation	Work Alternative	Surroundings	Socialization	Knowledge	Family	Challenge	Excitement	Commitment	Good At It	Contribution	Competition	Solitude	Recognition
<u>(AGE)</u>																	
Not important	NS	S	S	S	S	NS	S	S	S	S	S	S	S	S	S	S	S
Somewhat important	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Important	S	S	S	S	S	S	S	S	S	S	S	S	NS	NS	S	NS	NS
<u>(SEX)</u>																	
Not important	NS	S	NS	S	NS	S	S	S	S	S	S	S	S	S	S	S	S
Somewhat important	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
Important	S	S	S	S	S	S	S	S	S	S	S	S	S	NS	S	S	S
<u>(EDUCATION)</u>																	
Not Important	NS	S	S	NS	NS	NS	S	NS	S	S	S	S	S	S	S	S	S
Somewhat Important	NS	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	NS
Important	S	S	S	S	S	S	S	S	NS	NS	S	NS	NS	S	S	NS	NS
<u>(INCOME)</u>																	
Not important	NS	NS	S	NS	NS	NS	NS	NS	S	S	S	S	S	S	S	S	S
Somewhat important	NS	S	S	NS	S	S	S	S	S	S	NS	NS	NS	NS	NS	NS	S
Important	S	S	S	S	S	S	S	S	S	S	S	NS	S	NS	S	NS	NS
<u>(TYPE OF HOUSEHOLD)</u>																	
Not important	NS	NS	NS	NS	NS	S	NS	S	NS	S	S	S	S	S	S	S	S
Somewhat important	NS	S	NS	NS	NS	S	S	S	S	S	S	S	S	S	S	S	NS
Important	S	S	S	S	S	S	S	S	S	S	NS	NS	S	NS	NS	NS	NS

TABLE 40
SUMMARY OF SIGNIFICANT RELATIONSHIPS:
ACTIVITY PREFERENCES AND SOCIO-ECONOMIC VARIABLES,
CONTROLLING FOR THE EFFECTS OF THE SATISFACTION OF NEEDS

	Helps Relax	Places Pleasing	Helps Stay Healthy	Sense of Accomplishment	Socialize With Others	Physically Challenging	Increases Knowledge	Try New Things
<u>(AGE)</u>								
Never	S	NS	NS	NS	NS	NS	S	NS
Sometimes	S	S	S	S	S	S	S	S
Often	S	S	S	S	S	S	S	S
<u>(SEX)</u>								
Never	NS	NS	NS	NS	NS	S	NS	S
Sometimes	S	S	S	S	S	S	S	S
Often	S	S	S	S	S	S	S	S
<u>(EDUCATION)</u>								
Never	NS	NS	NS	NS	NS	NS	S	S
Sometimes	S	S	S	S	S	S	S	S
Often	S	S	S	S	S	S	S	S
<u>(INCOME)</u>								
Never	NS	NS	NS	NS	NS	NS	NS	NS
Sometimes	NS	NS	S	S	S	S	S	S
Often	S	S	S	NS	NS	S	NS	NS
<u>(TYPE OF HOUSEHOLD)</u>								
Never	NS	NS	NS	NS	NS	NS	NS	NS
Sometimes	NS	NS	S	S	S	S	S	S
Often	S	S	S	S	S	S	S	S

motivations might otherwise exert on recreational preferences and participation. There is a possibility, then, that access to recreation is relatively more difficult for these "special populations" than it is for others, suggesting that special attention should be directed towards them in recreational planning and management.

If this interpretation is correct (and the lack of independent associations between preferences and the satisfaction of needs among these three groups as shown in Table 38, lends support), then it may be expected that the number and strength of barriers to participation are greater for these than for other segments of the population. Since data for the further testing of this hypothesis are available elsewhere in the survey, and given its potential importance in the context of recreational planning and management, this question demands priority in subsequent stages of the data analysis and interpretation.

c) Results : detailed example

The example of multi-variate analysis chosen for detailed examination is that of the interrelationship between socialization as a reason for participating and age as a socio-economic variable (Table A4 to A11). Both of these variables were not only demonstrated earlier to have performed well as discriminators between recreational activity preferences, but also exerted almost uniformly independent effects on these preferences (Tables 37 and 39). Furthermore, the two variables are themselves interrelated (Table 35).

As far as the independent effects of socialization are concerned (Tables A4 to A8), the data show consistent and uniform increases in the preference for social activities and team sports, and a decline in the preference for exercise-oriented activities, as socialization was perceived to be increasingly more important, regardless of the age of the respondents. For example, among respondents aged 65 and over, the preference for social activities increased from 6.3% of those viewing socialization as "not important"; to 12.1% of those viewing socialization as "somewhat important", and to 15.3% among respondents viewing socialization as "important" (Table 45).

The original positive effect of the importance of socialization on the preference for team sports was also uniformly confirmed among all sub-groups of the sample defined according to age. Among the sub-group aged between 35 and 44 (Table A6) for instance the proportion expressing a preference for team sports increased from only 2.0% of those respondents viewing socialization as "not important" to 21.9% of those who viewed socialization as "important". Similarly, the original relationship between socialization and exercise-oriented activities was also upheld. The difference was most marked among the youngest age-group (Table A4), among whom only half as many on a proportional basis, of those viewing socialization as "important" (22.6%), chose exercise-oriented activities as their favourite type of recreation, as those who evaluated socialization as "not important" (44.2%).

Inferences about some of the other activity preferences are difficult, largely because of the relatively small numbers of people preferring them among each sub-group of the sample, thus illustrating a major limitation associated with this form of multi-variate analysis, namely the fragmentation of data. Nevertheless, it is still possible to identify a widespread if not uniform confirmation of the original findings about the influence of socialization on activity preferences, including the decline in preferences for self-propelled, extractive, and creative-cultural activities, and an increase in the preference for golf, with the increasing importance of socialization when the effects of the socio-economic variable age were controlled.

Turning now to the independent effects of age on activity preference (Tables A9 to A11), the general decline in preference for exercise-oriented activities and team sports is largely confirmed, as is the somewhat anomalous position of the oldest age-group of respondents. For instance, the data in Table A10 show that, among the sub-group of the sample who felt that socialization was a "somewhat important" reason for participating, 37.5% of the youngest age-group expressed a preference for exercise-oriented activities, compared with 28.6% of the 25 to 34 age-group, 23.2% of the 35 to 44 age-group, and 20.6% of the 45 to 64 age-group; the preference for this type of activity increased thereafter, to 27.3% of respondents aged 65 or older. Other independent effects of age on preference, while statistically significant, were not as clear as in the case of these examples.

It may, therefore, be concluded that the recreational activity choice process is affected by a set of interrelated factors, both situational (socio-economic) and motivational, and that preferences cannot be attributed to any one of these independently and alone. As an example, while 24.5% of all respondents expressed a preference for exercise-oriented activities, this proportion increased to 44.2% of the sub-group who simultaneously were aged 24 and under and viewed socialization as "not important" (Table A4). The proportion declined, however, to only 13.5% of respondents who simultaneously were aged 45 to 64 and viewed socialization as "important" (Table A7).

The one detailed case of multi-variate analysis presented here cannot, of course, be interpreted as a confirmation of the direction and strength of all original relationships, and the fact that this is not so is demonstrated by the fairly large number of statistically non-significant relationships summarized in Tables 37 and 38. Nevertheless, as a general observation, it is concluded from a review of close to one thousand tables that where relationships were both statistically significant and meaningful, they tended to confirm, as in the example, the findings reported earlier, especially with reference to the main discriminating statements concerning reasons for participating and the satisfaction of needs.

CONCLUSIONS

In Phase III of the report, results from bi-variate and multi-variate analyses of relationships between recreational activity preferences, reasons for participating, the satisfaction of needs, and socio-economic variables have been considered in some detail. In this case, the data were organized with reference to a revised classification of recreational activity preferences, which may be evaluated as performing better than the initial classification in terms of identifying who chooses which activities, why these choices are made, and the satisfactions which result from those choices. From a conceptual standpoint, the revised classification sought to minimize within-group variation and maximize between-group variation, and succeeded in doing this, as indicated by clearer and larger distinctions between activity-preference groups in motivational, satisfaction, and socio-economic terms than occurred using the initial classification. While it is more difficult to interpret differences among the eleven groups of the revised classification than the five groups of the original classification, and while there is a greater fragmentation of data into small groups in the former than in the latter, these limitations are more than compensated for by the improved insights which result when the revised classification is used to organize recreational activity preferences.

The remaining concluding remarks are organized into the following sections: a restatement of the rank-orders of recreational activity preferences, reasons for participating, and the satisfaction of needs; a

summary profile of each type of recreational activity; an identification of discriminating variables, and comments on consistency in the findings; and other main findings.

a) Preferences, reasons, and needs

- o On the basis of the revised classification, the following were the preferred types of recreational activity, in rank-order, among Albertans as represented by respondents to the 1981 survey:
exercise-oriented activities (21.1%); team sports (12.1%); camping (7.9%); hunting and fishing (7.3%); passive indoor activities (5.5%); non-self-propelled and/or mechanized outdoor recreational activities (5.2%); creative-cultural activities (4.8%); golf (4.7%); social activities (4.7%); downhill skiing (4.6%); and self-propelled outdoor recreation activities (4.0%).
- o Among Albertans as represented by respondents to the 1981 survey, the following were evaluated as the most important reasons for participating in the favourite recreational activity, in rank-order:
pleasure (described as "important" by 82.0% of the sample); relaxation (64.4%); health and exercise (64.0%); an alternative to work (59.0%); pleasant surroundings (56.8%); socialization with others (46.7%); being with the family (46.6%); improving skills and knowledge (45.3%); challenge (41.6%) excitement (41.0%); commitment (18.8%); competition (15.0%); good at it (14.6%); community contributions (14.5%); solitude (14.2%); and

recognition(6.9%). Since the frequencies with which these reasons were evaluated as important, and their rank order of importance varied among sub-groups of respondents defined according to their most preferred type of recreational activity, it was possible to characterize and distinguish between groups on the basis of reasons for participating.

- o Among Albertans as represented by respondents to the 1981 survey, the following were evaluated as the most frequently satisfied needs, in rank-order: "helps relax" (described as being satisfied "often" by 71.7% of the sample); "helps stay healthy" (66.4%); "places pleasing" (65.5%); "a sense of accomplishment" (52.4%); "physically challenging" (51.6%); "socialize with others" (49.8%); "increases knowledge" (42.1%); and "try new things" (40.1%). Since the frequencies with which these needs were satisfied, and their rank-order, varied among sub-groups of respondents defined according to their most preferred type of recreational activity, it was possible to characterize and distinguish between groups on the basis of the satisfaction of needs.

b) Profiles of activity-preference groups

- o Creative-cultural activities tended to be preferred by respondents who evaluated pleasure, relaxation, an alternative to work, the improvement of skills and knowledge, pleasant surroundings, commitment, egoism, and solitude as important. Needs satisfied by

- participation in creative-cultural activities included a sense of accomplishment, relaxation, pleasing places, trying new things, and an increase in knowledge. Preferences for creative-cultural activities were more frequent among females than males, and among couples with no children, but did not appear to be influenced by age, education, or income.
- o Social activities were preferred by respondents who evaluated pleasure, relaxation, an alternative to work, socialization, a contribution to the community, and recognition as important. Needs satisfied by participation in social activities included relaxation and socialization. Preferences for social activities increased among successively older age-groups, among females, among respondents with a high school education, and among single-parent families, but were not influenced by income.
 - o Passive activities were preferred by respondents who evaluated pleasure, relaxation, and solitude as important. Needs satisfied by participation in passive activities included relaxation and an increase in knowledge. Other than these findings, preferences for passive activities are best described in negative terms. Preferences for passive activities were most frequently expressed among older age-groups, females and the better-educated, but were not influenced by income or type of household.
 - o Exercise-oriented activities, which ranked first in preference among the sample as a whole and almost uniformly among all sub-groups, were

- preferred more frequently by respondents who evaluated health and exercise as important. Needs satisfied by participation in exercise-oriented activities included staying healthy, a physical challenge, and relaxation. Preferences for exercise-oriented activities declined with age but increased with education, and were more frequent among females, single-parent families, and households with one or more unrelated adults, but were not affected by income.
- o Team sports were preferred by respondents who evaluated pleasure, health and exercise, socialization, an alternative to work, challenge, and excitement as important. Needs satisfied by participation in team sports included staying healthy, a physical challenge, and socialization. Preferences for team sports declined with age, and were most frequently expressed by males and by respondents with a high-school education and a middle-level income, but were not influenced by the type of household.
 - o Golf was preferred by respondents who evaluated pleasure, relaxation, health and exercise, pleasant surroundings, and socialization as important. Needs satisfied by participation in golf included pleasing places and socialization. Preferences for golf were more frequent among males, couples with no children, and the intermediate levels of education, and increased with age and income.
 - o Downhill skiing was preferred by respondents who evaluated pleasure, health and exercise, pleasant surroundings, excitement, and challenge as important. Needs satisfied by participation in downhill skiing

included staying healthy, a physical challenge, pleasing places, and relaxation. Preferences for downhill skiing were approximately equal among males and females, and increased with both education and income, whereas they declined sharply with age; preferences for downhill skiing were also more frequently expressed by respondents from households with one or more unrelated adults.

- o Hunting and fishing (extractive activities) were preferred by respondents who evaluated pleasure, pleasant surroundings, relaxation, an alternative to work, and being with family as important. Needs satisfied by participation in extractive activities included relaxation, pleasing places, and an increase in knowledge. Preferences for extractive activities were almost exclusively expressed by males, were more prevalent among the intermediate age-groups and couples regardless of the presence of children in the family, declined with education, and were not influenced by income.
- o Camping was preferred by respondents who evaluated pleasure, pleasant surroundings, relaxation, being with the family, and an alternative to work as important. Needs satisfied by participation in camping included relaxation, pleasing places, and an increase in knowledge. Preferences for camping were not affected by sex, and declined with higher education, but were more frequent among respondents from intermediate age and income groups, and among couples, especially those with children.

- o Self-propelled activities were preferred by respondents who evaluated pleasure, pleasant surroundings, health and exercise, relaxation, and solitude as important. Needs satisfied by participation in self-propelled activities included staying healthy, a physical challenge, pleasing places, and relaxation, but not socialization. Preferences for self-propelled activities increased with education and were more prevalent among intermediate age-groups, but were not influenced by sex, income, or type of household.
 - o Mechanized and non-self-propelled outdoor recreation activities were preferred by respondents who evaluated pleasure, an alternative to work, relaxation, challenge, and excitement as important. Needs satisfied by participation in mechanized activities included relaxation and pleasing places. Preferences for mechanized activities declined with education, and were more prevalent among the intermediate age-groups and among respondents from single-parent families, but were not influenced by sex or income.
- c) Discriminating variables; consistency in the findings
- o On the basis of multi-variate analysis, the following reasons for participating in the favourite recreational activity were identified as best discriminating between activity preferences: health and exercise, pleasant surroundings, socialization, being with the family, challenge, excitement, competition, solitude, and recognition. Discriminating less well or not at all were:

- relaxation, the improvement of skills and knowledge, egoism ("good at it"), community contribution, and alternative to work.
- o On the basis of multi-variate analysis, the following statements concerning the satisfaction of needs were identified as best discriminating between activity preferences: "places pleasing", "helps stay healthy", "socialize with others", and "physically challenging". These were consistent with some of the best-discriminating reasons for participating. Discriminating less well were "a sense of accomplishment", "increases knowledge", "try new things", and "helps relax".
 - o In general, the findings concerning reasons for participating were consistent with those concerning the satisfaction of needs, i.e. the reasons evaluated as most important by the members of each recreational activity preference group corresponded to the needs most frequently satisfied. The only major inconsistency was in terms of the more frequent satisfaction of a need than the frequency with which the corresponding reason was evaluated as important.
 - o Of the five socio-economic variables, age and sex were most closely related to activity preferences, while income performed poorly as a predictor of preference. Education and type of household occupied an intermediate position between these two extremes. Similar findings emerged in terms of socio-economic variations in reasons for participating in, and the needs satisfied by the favourite recreational activity.

d) Other main findings

- o Results derived from multi-variate analyses of the data generally confirmed rather than rejected findings developed on the basis of bi-variate analysis.
- o The choice of recreational activity preferences must be viewed as a complex process reflecting interactions between situational factors (socio-economic characteristics), motivational factors (reasons for participating), and the needs which are satisfied in various types of activity. No single factor alone fully explains variations in recreational activity preferences across a population. Furthermore, it is combinations of motivations and needs which best distinguish between types of activity. While every activity-type shared the importance of at least one reason or need with other types, no two types of recreational activity were characterized by the same combination of reasons or needs, nor did they appeal to identical segments of the population.
- o Three "special populations" were defined among whom situational factors may override the influence of reasons for participating. These were respondents aged 65 or over, those with an income of \$10,000 or less, and respondents from single-parent families. This finding suggests the need for further examination of data concerning barriers to participation in recreation. If the special needs of these groups are confirmed, they should be addressed in innovative forms of recreation planning and management.

Implications of these findings for recreational planning and management in Alberta, with particular reference to municipal recreation services, will be dealt with in Phase IV of the report.

PHASE IV IMPLICATIONS

In this final phase of the report, the term "implications" has been interpreted rather broadly. Consideration is given to the practical implications of the data analysed in Phases I and III for recreational policy development, planning, and management. As well, implications for the design of future surveys and the analysis of the data they generate are discussed.

PRACTICAL IMPLICATIONS

For several reasons relatively general rather than specific practical implications are discussed here. First, a complete analysis of the policy, planning, and management implications of all the detailed findings would require a lengthy analysis and report, but it is more appropriate at this stage to indicate the general nature of the implications as a guide to developing more specific implications in the future. Secondly, although the data have been analysed in some detail in the preceding phases of the report, further analysis would likely be required if specific findings are to be translated into practice with a reasonable degree of certainty that they reflect Albertans' recreational preferences and the underlying factors which shape these preferences. Third, the data which have been considered in this report are only one small part of the findings from the 1981 Public Opinion Survey on Recreation. While they

can contribute to the formulation and development of governmental recreation strategies, ultimately they must be placed in the context of the findings from the survey as a whole, and examined in conjunction with other relevant data, such as those concerning barriers to recreation participation. Finally, unless a rather questionable assumption about substitutability among recreational activities within the sub-groups of the activity classification is made, it may not be possible to draw inferences about all specific activities within a given sub-group on the basis of interpretations referring to that sub-group of activities as a whole.

A Framework for Developing Practical Implications

Despite the preceding qualifications, several types of practical implications may emerge from the findings described in preceding sections of the report. These are best visualised within an organizational framework which identifies five scales of application, together with the general type of application appropriate to each scale, the specific applications, and the data which are either available or required (Table 41).

The scale of application varies from the largest appropriate for the implications of this survey, namely the province, to the smallest possible level of application, namely the individual resident of Alberta, who may or may not be currently participating in various forms of leisure or recreation activity, and who may or may not be currently achieving success

TABLE 41
A FRAMEWORK FOR PRACTICAL IMPLICATIONS

SCALE OF APPLICATION	TYPE OF APPLICATION	SPECIFIC APPLICATION	DATA AVAILABLE OR REQUIRED
Provincial	Recreation policy development	Forecasting recreational demand, participation, and the need for new resources and facilities	Effects of socio-economic variables on recreational preferences and participation; effects of barriers to participation
Regional	Translation of general policies into regional policies	Application as above, with reference to specific regions or types of area (e.g. urban vs. rural)	As above
Local	Recreation planning	Allocation of resources and facilities to meet local needs	As above
Specific resources and facilities	Management	Modifying the availability and upgrading the quality of resources and facilities	Reasons for participating and the satisfaction of needs
Individual recreationists	Counselling	Counselling	Reasons for participating and the satisfaction of needs

in choosing activities which best match his or her underlying motivations and needs.

The framework also demonstrates that the type of application varies according to scale and, more importantly for the implications of the findings described here, that the nature of the appropriate data may also vary according to scale. Thus the development of recreational policy at the provincial level, and its translation into more specific regional policies may consist, in part, in determining future levels of recreation demand and participation, for which new resources and facilities might be allocated. For this purpose, the data concerning socio-economic variations in recreation participation, though necessarily crude, would be the most appropriate, especially if they were to be examined in conjunction with the findings on barriers to participation. At the other end of the spectrum, the data concerning reasons for participating and the satisfaction of needs will provide a valuable input into leisure counselling in which the objective would be to advise individuals of the types of activity best suited to their personal characteristics and circumstances.

Forecasting Demand: Implications at the Provincial, Regional, and Local Scales

Based on the identification of relationships between socio-economic variables and recreational activity preferences, inferences may be drawn about present and future demand for and participation in recreational activities, and therefore the need for resources and facilities. This may

be particularly important at the provincial level, for which future requirements may be forecast on the basis of projections of population both in total and in terms of population structure. Anticipated increases in the number of young people, for example, who may be attracted to Alberta from elsewhere in Canada, are likely to result in a rising demand for downhill skiing and team sports facilities.

Structural changes in population according to education and income levels, and family type as well as age will also have implications for recreation demand. These cannot be enumerated here, however, since population forecasts are not immediately available to the writer, and because an excessively large number of specific projections of this kind are possible.

Similar forecasts as at the provincial level may be made at the regional and local scales and, in addition, crude checks may be made of the extent to which local and regional resources and facilities currently available match the needs of the population. Both these tasks are of special importance in places where the local population structure departs significantly from the provincial norm, as in Fort McMurray, for example. Furthermore, care must be taken to distinguish between types of region or locality, such as Edmonton and Calgary, smaller cities, towns, and rural areas. In these cases it might be advisable to re-examine general findings based on the provincial sample for those sub-sections of the sample drawn from the particular region or locality for which specific forecasts are being made.

The analysis of socio-economic variations in recreational preferences also led to the identification of at least three special populations, for whom the impact of situational factors may override the strength of the motivations for participation in recreation. It would be desirable to examine data from other parts of the survey to check if indeed relatively older people, those with an income of less than \$10,000, and single parents constitute special populations, and what is the precise nature of the barriers for these sub-groups of the population. Assuming that their existence is confirmed, then special policies should be formulated in an effort to relax the effects of these barriers to participation.

One general qualification related to the use of socio-economic variables to generate provincial-level forecasts of future demand should be recognized, namely that the degree of accuracy is likely to decline in proportion to the length of the time-period over which the forecast is made. Other, more general qualifications are as follows: first, as noted earlier, the conclusions have been made on the basis of classes of recreational activity and may not apply equally accurately to specific activities within classes unless substitutability is assumed. Secondly, statistical relationships between socio-economic variables and recreational activity preferences are by definition characterized by probability and uncertainty, and therefore a reasonably wide margin of error must be allowed for if projections are to be made on the basis of a sample. Thirdly, the use of single variables as predictors is less likely to provide accurate forecasts than if more complex profiles based on a

combination of several socio-economic variables were to be employed. Lastly, because socio-economic variables represent only one set of several factors related to recreation preferences (others being motivations and the satisfaction of needs), their use can give only a crude indication of present and future demand, based on an imperfect understanding and explanation of variations in preferences.

Improving the Quality of Resources and Facilities

Some of the data examined in this report have implications for the management of specific resources and facilities, especially the improvement of the quality of these resources and facilities so that they best fulfil the reasons why Albertans recreate and the needs they seek to satisfy in recreation participation.

It is, of course, difficult to translate into practice findings concerning motivational and satisfaction variables, which to a very large extent are a personal expression of, if not necessarily unique to, the individual recreationist. These types of data do serve, however, as a reminder that planning for the enhancement of the quality of the recreational experience is an equally important objective as the "numerical" aspects of recreational planning expressed in terms of the location, number, access to, and timing of resources, facilities, and programs. Recreation policy-makers, planners, and managers need to be aware that, as demonstrated in the earlier sections of this report, different types of recreational activity are associated with different

motivations and needs. Furthermore, the recreational experience is multi-dimensional in the sense that it is a combination of motivations and needs which distinguishes between preferences for recreational activities rather than individual reasons and needs alone.

Recreational policy-makers, planners, and managers can therefore take advantage of the relevant findings in two ways. They may draw upon the profiles of recreational activity types and the appropriate outlets which were identified with regard to the reasons and needs, and attempt to ensure that these motivations are fulfilled and needs satisfied in recreation generally and in the use of particular resources and facilities specifically. They may also seek to improve the quality of resources, facilities, and programs in various ways so that the quality of the experience enjoyed by recreationists in Alberta is maximized.

Judging by the finding concerning a very high level of consistency between the importance of reasons for participating and the needs which are satisfied by participation, Albertans, as represented by respondents to the survey, appear to be enjoying a reasonably satisfactory level of recreational experience at present. These findings should not, however, be cause for complacency, and it may therefore be advisable to conduct "spot-check" surveys from time to time of users of specific resources and facilities to ensure that recreational policy and planning objectives are being met.

Leisure Counselling: Implications for the Individual Recreationist

The data concerning reasons for participating and the satisfaction of needs may also have some practical value in terms of leisure counselling. While there may be few actual or potential recreationists in Alberta who are currently experiencing difficulty in selecting some form of recreational activity appropriate to their needs, at least at a satisfactory if not necessarily an optimal level, recreation counsellors may take advantage of the findings by assisting individuals in their choice of recreational activities, resources, facilities, and programs. Furthermore, this aspect of recreational management will undoubtedly become more critical in the future as the increasing complexity of society is matched with an increasingly complex and varied array of opportunities for recreation. The data examined in this report, however, should be viewed only as an initial and most basic step in the direction of leisure counselling. It is recommended, therefore, that future surveys be conducted specifically for the purpose of their implications for leisure counselling.

IMPLICATIONS FOR FUTURE SURVEYS

Since most of the implications for the design and analysis of future surveys have been touched on at earlier stages of this report, all that is required here is to present a brief recap. Four main points should be noted: the need for a larger number and more complex range of statements concerning reasons for participating and the satisfaction of needs; the need for more categories of response to these statements; the utilization of a revised classification of recreational activity preferences; and the importance of conducting multi-variate as opposed to bi-variate analysis of the data.

As observed towards the end of Phase I of the report, while some clear-cut differences between types of recreational activity emerged on the basis of reasons for participating and the satisfaction of needs, a total of twenty-four statements concerning these variables may be insufficient to measure the full range and complexity of the underlying dimensions of recreational preference. In addition, three categories of response to each statement may be inadequate to elicit an accurate answer from all respondents, and may therefore serve to obscure important differences in motivations and satisfactions among respondents who prefer different recreational activities. It is therefore recommended that future surveys include a larger number of statements as well as a greater range of pre-coded responses. These recommendations, however, must be balanced against an apparent additional length of the questionnaire and the extra time demanded for its completion, both of which may result in an undesirable reduction in the response rate of the survey.

While there is no reason to reject the original classification of recreational activity preferences as a means of organizing the questionnaire, an alternative classification such as the one developed in Phase II of the report should be employed for the purpose of data analysis. Whatever classification is used, its objective should be to group recreational activities together in such a way that within-group variation is minimized and between-group variation is maximized (see Phase II). Also, to ensure consistency of interpretation of the results from the 1981 survey, the revised classification should be used in the analysis of all other comparable sections of data.

Finally, it is important to conduct at least a basic version of multi-variate analysis of the data derived from future surveys, rather than rely on bi-variate analysis alone. Otherwise, the danger exists of accepting at face value and as correct, relationships which in fact are spurious and due, instead, to the influence of a third variable. Also, a failure to conduct a multi-variate analysis may mean that potentially important insights into the data are overlooked. In the present study, for example, the identification of three special populations emerged only in multi-variate analysis; these were likely to have been missed if bi-variate analysis alone had been employed.

CONCLUSIONS

Phase IV of the report has examined two sets of implications of the 1981 Public Opinion Survey on Recreation, namely those related to recreational policy, planning, and management, and those concerning the design and analysis of future surveys. Although the implications and recommendations have been couched in rather general terms, they should be sufficient as guides which may assist in the delivery of future recreation services in Alberta.

APPENDIX TABLES

APPENDIX

TABLE 1

ORIGINAL ACTIVITY PREFERENCE CLASSIFICATION

CREATIVE CULTURAL ACTIVITIES (93)

Ballet (1), Flower arranging (40), Mechanics, metalwork (6), Model making (2), Musical instruments (8), Painting, arts, pottery (17), Photography (12), Stamp collecting (1), Theatre (6).

OUTDOOR ACTIVITIES (924)

Archery (2), ATV use (1), Backpacking (7), Ballooning, flying (7), Bicycling (44), Boating (23), Camping (191), Canoeing, kayaking (5), Cross-country skiing (33), Downhill skiing (111), Driving for pleasure (14), Fishing (108), Frisbee throwing (4), Gardening (21), Hang-gliding (2), Hiking (26), Horse riding (37), Hunting (68), Ice yachting (1), Motorcycling (11), Mountaineering (5), Nature walks (8), Picnics (17), Racing horses (2), Rallying (1), Rodeo (8), Rollerskating (9), Sailing (12), Scuba diving (4), Skating (17), Snowmobiling (13), Snowshoeing (2), Tobogganing (3), Walking for Pleasure (93), Waterskiing (14)

PHYSICAL ACTIVITIES (740)

Badminton (9), Baseball (64), Basketball (16), Bowling (50), Calisthenics (17), Curling (68), Field hockey (1), Figure skating (1), Football (16), Golf (115), Gymnastics (2), Hockey, floor hockey (101), Jogging (42), Martial arts (3), Racquetball, handball (75), Soccer (14), Swimming (80), Tennis (37), Volleyball (13), Weightlifting, body-building (14), Yoga (2).

SOCIAL ACTIVITIES (95)

Dancing (52), Dining out (8), Entertaining (10), Organizations, meetings (4), Pool, billiards, snooker (10), Spectatorship (11).

LEISURELY ACTIVITIES (235)

Board games, cards (30), House maintenance (2), Movies (4), Radio, records (20), Reading (89), Shuffleboard (3), Travel, vacationing (24), TV viewing (21), Other in-home activities (12), Other out-of-home activities (30).

APPENDIX TABLE 2
DERIVATION OF "REASONS FOR PARTICIPATING" DIMENSIONS

A. THE "CHALLENGE" DIMENSION

(Minimum score = 6; maximum score = 18)

<u>Score</u>	<u>n</u>	<u>%</u>
6	63	3.3
7	93	4.9
8	124	6.5
9	170	9.0
10	216	11.4
11	233	12.3
12	232	12.2
13	221	11.6
14	191	10.1
15	153	8.1
16	113	6.0
17	69	3.6
18	21	1.1
Total	1899	100.0

"Challenge"

"Not at all important" (6-9)	450	23.7
"Not very important" (10,11)	449	23.6
"Somewhat important" (12,13)	453	23.9
"Very important" (14-18)	547	28.8

....continued

Appendix Table 2, continued

B. THE "RELAXATION" DIMENSION

(Minimum score = 3; maximum score = 9)

<u>Score</u>	<u>n</u>	<u>%</u>
3	6	0.3
4	16	0.8
5	77	3.9
6	189	9.6
7	372	18.9
8	533	27.1
9	777	39.4
Total	1970	100.0
<u>"Relaxation"</u>		
Low importance (3-7)	660	33.5
Medium importance (8)	533	27.1
High importance (9)	777	39.4

C. THE "SOCIALIZATION" DIMENSION

(Minimum score = 3; maximum score = 9)

<u>Score</u>	<u>n</u>	<u>%</u>
3	23	1.2
4	55	2.9
5	199	10.4
6	357	18.7
7	574	30.0
8	453	23.7
9	252	13.2
Total	1913	100.0
<u>"Socialization"</u>		
Low importance (3-6)	634	33.1
Medium importance (7)	574	30.0
High importance (8, 9)	705	36.9

APPENDIX
TABLE 3
REVISED ACTIVITY PREFERENCE CLASSIFICATION

CREATIVE-CULTURAL ACTIVITIES (116)

Ballet (1), Flower arranging (40), Gardening (21), House maintenance (2), Mechanics (6), Model making (2), Musical instruments (8), Painting, pottery (17), Photography (12), Stamp collecting (1), Theatre (6).

SOCIAL ACTIVITIES (113)

Board games, cards (30), Dancing (52), Dining out (8), Entertaining (10), Pool, billiards (10), Shuffleboard (3).

PASSIVE ACTIVITIES (134)

Movies (4), Radio, records (20), Reading (89), TV viewing (21).

EXERCISE-ORIENTED ACTIVITIES (512)

Archery (2), Badminton (9), Bicycling (44), Bowling (50), Calisthenics (17), Figure skating (1), Frisbee throwing (4), Gymnastics (2), Jogging (42), Martial arts (3), Nature walks (8), Racquetball, handball (75), Rollerskating (9), Skating (17), Swimming (80), Tennis (37), Tobogganning (3), Walking for pleasure (93), Weightlifting (14), Yoga (2).

TEAM SPORTS (293)

Baseball (64), Basketball (16), Curling (68), Field hockey (1), Football (16), Hockey (10), Soccer (14), Volleyball (13).

SELF-PROPELLED OR NON-MECHANIZED "OUTDOOR RECREATION" ACTIVITIES (96)

Backpacking (7), Canoeing, kayaking (5), Cross-country skiing (33), Hang-gliding (2), Hiking (26), Mountaineering (5), Sailing (12), Scuba diving (4), Snowshoeing (2)

continued

Appendix Table 3, continued

NON-SELF-PROPELLED OR MECHANIZED "OUTDOOR RECREATION" ACTIVITIES (127)

ATV use (1), Ballooning, flying (7), Boating (23), Driving for pleasure (14), Horse riding (37), Ice yachting (1), Motorcycling (11), Racing cars (3), Racing horses (2), Rallying (1), Snowmobiling (13), Waterskiing (14).

GOLF (115)

Golf (115)

DOWNHILL SKIING (111)

Downhill skiing (111)

CAMPING (191)

Camping (191)

"EXTRACTIVE" ACTIVITIES (176)

Fishing (108), Hunting (68)

AGES FINAL DATA SET

PAGE 369

12/16/81

FILE AGES (CREATION DATE = 12/16/81)

***** C R O S S T A B U L A T I O N O F *****
 FAVACTN FAVORITE ACTIVITY GROUPING
 CONTROLLING FOR.. BY SOCIALIZ SOCIALIZATION IMPORTANCE

PAGE *****
 RESPONDENT'S AGE GROUP VALUE = 1. UP TO 24 ***** PAGE 1 OF 2

SOCIALIZ

COUNT		ROW PCT		COL PCT		INFO		SOMEWHAT		IMPORTAN		PCN	
		TOT PCT		TOT PCT		TOT PCT		TOT PCT		TOT PCT		TOTAL	
FAVACTH	-	-	-	-	-	-	-	-	-	-	-	-	-
	1.	4	1	21.1	1	57.9	1	21.1	1	4	1	19	4.9
	I	9.3	1	7.6	1	2.0	1						
	I	1.0	1	2.8	1	1.0	1						
CREATIVE CULTURA	-	-	-	-	-	-	-	-	-	-	-	-	-
	2.	2	1	6	1	17	1					25	6.5
	I	6.0	1	24.0	1	68.0	1						
	I	4.7	1	4.2	1	8.5	1						
SOCIAL	-	-	-	-	-	-	-	-	-	-	-	-	-
	I	0.5	1	1.6	1	4.4	1						
	I												
	I												
PASSIVE	-	-	-	-	-	-	-	-	-	-	-	-	-
	3.	3	1	6	1	9	1					18	4.7
	I	16.7	1	33.3	1	50.0	1						
	I	7.0	1	4.2	1	4.5	1						
EXERCISE	-	-	-	-	-	-	-	-	-	-	-	-	-
	4.	19	1	54	1	45	1					118	30.6
	I	16.1	1	45.8	1	33.1	1						
	I	44.2	1	37.5	1	22.6	1						
TEAM SPORT	-	-	-	-	-	-	-	-	-	-	-	-	-
	5.	6	1	20	1	55	1					90	23.3
	I	6.7	1	31.1	1	62.2	1						
	I	14.0	1	19.4	1	28.1	1						
SELF-PROPELLED	-	-	-	-	-	-	-	-	-	-	-	-	-
	6.	1	1	2	1	5	1					6	2.1
	I	12.5	1	25.0	1	62.5	1						
	I	2.3	1	1.4	1	2.5	1						
MECHANIZED OUTDO	-	-	-	-	-	-	-	-	-	-	-	-	-
	7.	3	1	5	1	17	1					25	6.5
	I	12.0	1	20.0	1	69.0	1						
	I	7.3	1	3.5	1	9.5	1						
COLUMN	-	-	-	-	-	-	-	-	-	-	-	-	-
	43	1	1	1	1	1	1					335	122.9
	11.1	1	31.3	1	51.5	1							

FILE AGE1 (CREATION DATE = 12/16/61)

 FAVORITE ACTIVITY GROUPS
 CRIPPLED FCT...

RESPONDENT'S AGE GROUP

 VALUE = 1. UP 10.0

 PAGE 2 OF 2

SOCIALIZ

	COL FCT	INT	INTO	SCHMANT	IMPACT	PER	TOTAL
	TOT FCT	I	I	I	I	I	I
FAVACH	3.1	1.1	2.1	3.1	1		
GOLF	3.1	0.1	3.1	4.1	1	7	1.0
	0.0	1.0	42.0	17.1	1	1.0	
	0.0	1.0	2.1	2.0	1		
	0.0	1.0	0.0	1.0	1		
DEATH SKING	3.1	0.1	15.1	16.1	1	31	0.0
	0.0	1.0	43.0	11.6	1	0.0	
	0.0	1.0	10.4	3.0	1		
	0.0	1.0	3.9	4.1	1		
CAMPING	17.1	1.1	6.1	17.1	1	24	4.2
	4.2	1.0	25.0	17.0	1	4.2	
	2.3	1.0	4.2	3.5	1		
	0.3	1.0	1.6	4.4	1		
EXPERIATIVE	13.1	1.1	7.1	4.1	1	13	3.4
	15.4	1.0	53.0	17.6	1	3.4	
	4.7	1.0	4.9	2.0	1		
	0.5	1.0	1.3	1.0	1		
OTHER	5.1	1.1	1.1	5.1	1	3	2.1
	25.0	1.0	12.5	12.5	1	2.1	
	4.7	1.0	0.7	2.5	1		
	0.5	1.0	0.3	1.3	1		
COLUMN	43	16.0	187	376			
TOTAL	11.1	37.3	11.6	100.0			

CHI SQUARE = 42.1845 WITH 22 DEGREES OF FREEDOM SIGNIFICANCE = 0.0000

CAMPING'S V = 0.23376

CONTINGENCY COEFFICIENT = 0.3130

LORDA (ASYMPTOTIC) = 0.0410 WITH 100 IN DEPENDENT.

LORDA (ASYMPTOTIC) = 0.0503

UNSATURATED COEFFICIENT (ASYMPTOTIC) = 0.02976 WITH FAVORABLE DEPENDENT.

UNSATURATED COEFFICIENT (ASYMPTOTIC) = 0.02976

RESIDUAL'S TAU R = 0.12319 SIGNIFICANCE = 0.0001

RESIDUAL'S TAU R = 0.10234 SIGNIFICANCE = 0.0001

GOLF = 0.10663

CAMPING'S D (ASYMPTOTIC) = 0.10673 WITH FAVORABLE DEPENDENT.

CAMPING'S D (ASYMPTOTIC) = 0.10130

= 0.0000 WITH SOCIALIZ DEPENDENT.

***** C O S T A B L E *****
 TAVETH FAVORITE ACTIVITY GROUPS :
 ***** BY SOCIALIZ. SOCIALIZATION INFLUENCE
 ***** CONTROLLING FOS. *****

RACE **RESPONDENT'S AGE GROUP**

value =

PAGE 1 OF 2

[illegible]

166111

FAVORCH FAVORITE ACTIVITY GROUP
 CONTROLLING FOR:
 AGE PERFORMANCE'S AGE GROUP

0.551 A B U I I O H F
 FAVORCH FAVORITE ACTIVITY GROUP

GROUP 1 2 3 4 5 6 7 8 9 10 11 12
 PAGE 2 OF 2

SOCIALIZ

FAVORCH	CONF I	FOR FCI INST HUG SPORCH	INSTIAN	FCI TOTAL
		COL FCI INSTIAN	INSTIAN	
		1.1	3.1	
GOLF	1	1	12	21
	1	4.0	13.1	3.0
	1	1.1	2.6	3.6
	1	0.1	1.1	1.7
	1	1	1	1
ESKIMU SKIING	2	6	19	25
	1	12.0	39.0	9.0
	1	6.5	6.0	2.0
	1	0.5	2.7	3.5
	1	1	1	1
CAMPING	10	6	26	33
	1	9.2	40.0	9.0
	1	6.5	9.3	7.0
	1	0.3	3.7	0.7
	1	1	1	1
EXTRACTIVE	11	13	23	19
	1	23.0	41.0	1.5
	1	10.0	6.2	5.7
	1	1.3	3.2	3.7
	1	1	1	1
OTHER	12	1	5	10
	1	6.3	31.3	2.5
	1	1.1	1.0	3.0
	1	0.1	0.7	1.0
	1	1	1	1
COLUM		93	200	702
TOTAL		13.1	39.3	7.0
				100.0

CHI SQUARE = 66.53757 WITH 22 DEGREES OF FREEDOM SIGNIFICANCE = 0.0000

CHI SQUARE = 0.21457

CONTINGENCY COEFFICIENT = 0.2302

LANCA (SPHERICAL) = 0.6 WITH 1

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FILE AGE1 (CREATION DATE = 12/16/81)

***** CROSSTABULATION OF *****
FAVACTN FAVORITE ACTIVITY GROUPING BY SOCIALIZ SOCIALIZATION INFORMATION
CONTROLLING FOR..

RAGE RESPONDENT'S AGE GROUP

VALUE = 3. 35 TO 44

PAGE 1 OF 2

COUNT I
SOCIALIZ

FAVACTN	COL PCT INST	INFO	SOMEWHAT	IMPORTAN	RCW
TOT PCT I	INSTANT	INFORMA	TOTAL		
1. I	3 I	5 I	9 I	17	
CREATIVE CULTURA	I 17.6 I	I 29.4 I	I 52.9 I	I 4.7	
I	I 5.9 I	I 3.0 I	I 6.2 I		
I	I 0.0 I	I 1.4 I	I 2.5 I		
2. I	I 1 I	I 7 I	I 9 I	I 17	
SOCIAL	I 5.9 I	I 41.2 I	I 52.9 I	I 4.7	
I	I 2.0 I	I 4.3 I	I 6.2 I		
I	I 0.3 I	I 1.9 I	I 2.5 I		
3. I	I 4 I	I 5 I	I 7 I	I 16	
PASSIVE	I 25.0 I	I 31.3 I	I 43.8 I	I 4.4	
I	I 7.0 I	I 3.0 I	I 4.8 I		
I	I 1.1 I	I 1.4 I	I 1.9 I		
4. I	I 11 I	I 38 I	I 30 I	I 79	
EXERCISE	I 13.9 I	I 48.1 I	I 39.0 I	I 21.9	
I	I 21.6 I	I 23.2 I	I 20.5 I		
I	I 3.0 I	I 10.5 I	I 8.3 I		
5. I	I 1 I	I 14 I	I 32 I	I 47	
TEAM SPORT	I 2.1 I	I 29.8 I	I 68.1 I	I 13.0	
I	I 2.0 I	I 8.5 I	I 21.9 I		
I	I 0.3 I	I 3.9 I	I 8.9 I		
6. I	I 6 I	I 13 I	I 3 I	I 22	
SELF-PROPELLED O	I 27.3 I	I 59.1 I	I 13.6 I	I 6.1	
I	I 11.8 I	I 7.9 I	I 2.1 I		
I	I 1.7 I	I 3.6 I	I 0.8 I		
7. I	I 4 I	I 15 I	I 12 I	I 31	
MECHANIZED CUTDO	I 12.9 I	I 49.4 I	I 35.7 I	I 8.6	
I	I 7.0 I	I 9.1 I	I 6.2 I		
I	I 1.1 I	I 4.2 I	I 3.3 I		
COUNT	31	145	145	341	
TOTAL	24.1	45.4	41.6	111.0	

AGES FINAL DATA SET

FILE AGE1 (CREATION DATE = 12/14/81)

PAGE 376

FAVACHN FAVORITE ACTIVITY GROUP

CONTROLLING FOR...

PAGE 2 OF 2

RESPONDENT'S AGE GROUP

VALUE = 3. 15 10.00

COEFF I SOCIALIZ

PCF PCF INOT INFO CONFIRMAT INOT INOT

COL PCF INOT INFO CONFIRMAT INOT INOT

TOT PCF I 1.1 2.1 3.1

FAVACHN

0. 1 1 0 1 2 1 21

1 4.3 1 33.1 1 6.1 1 5.3

2 2.0 1 4.9 1 2.1 1 2.1

3 0.3 1 2.2 1 1.3 1 1.3

4 1 1 1 1 1 1

5 1 1 1 1 1 1

6 1 1 1 1 1 1

7 1 1 1 1 1 1

8 1 1 1 1 1 1

9. 1 4 1 0 1 9 1 16

1 22.2 1 44.4 1 7.3 1 5.0

2 7.9 1 4.9 1 1.1 1 1.1

3 1.1 1 2.2 1 1.7 1 1.7

4 1 1 1 1 1 1

5 1 1 1 1 1 1

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8 1 1 1 1 1 1

9 1 1 1 1 1 1

10. 1 9 1 24 1 10 1 51

1 17.6 1 47.1 1 7.3 1 14.1

2 17.6 1 14.6 1 1.3 1 1.3

3 2.5 1 6.6 1 1.3 1 1.3

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10. 1 6 1 20 1 6 1 32

1 18.0 1 62.5 1 17.3 1 0.9

2 11.8 1 12.2 1 0.1 1 0.1

3 1.7 1 5.5 1 1.7 1 1.7

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10. 1 1 1 7 1 2 1 10

1 10.0 1 70.0 1 16.0 1 2.8

2 2.0 1 4.3 1 1.0 1 1.0

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FILE AGE1 (CREATION DATE = 12/16/81)

***** C R O S S T A B U L A T I O N O F *****
 FAVACTN FAVORITE ACTIVITY GROUPING BY SOCIALIZ SOCIALIZATION IMPORTANCE
 CONTROLLING FOR..

RAGE RESPONDENT'S AGE GROUP VALUE = 4. 45 TO 64 ***** PAGE 2 OF 2

SOCIALIZ

	COUNT	POW	PCT	INFO	SOCIALIZ	IMPORTANCE	POW
	COL	PCT	IRIANT	IMPORTANCE	Y	TOTAL	
FAVACTN	TOT	PCT	I	1.1	2.1	3.1	
GOLF	8.	I	3	I	10	I	50
		I	6.0	I	38.0	I	11.7
		I	3.6	I	11.2	I	15.7
		I	0.7	I	4.4	I	6.5
DOWNHILL SKIING	9.	I	4	I	6	I	12
		I	33.3	I	50.0	I	16.7
		I	5.0	I	3.5	I	1.1
		I	0.9	I	1.4	I	0.5
CAMPING	10.	I	4	I	20	I	16
		I	10.0	I	50.0	I	40.0
		I	5.0	I	11.6	I	9.0
		I	0.9	I	4.7	I	3.7
EXTRACTIVE	11.	I	10	I	26	I	26
		I	16.1	I	41.9	I	41.9
		I	12.5	I	15.3	I	14.6
		I	2.3	I	6.1	I	6.1
OTHER	12.	I	3	I	9	I	10
		I	13.6	I	40.9	I	45.5
		I	3.0	I	5.3	I	5.6
		I	0.7	I	2.1	I	2.3
COLUMN	80	170	170	170	170	428	
TOTAL	18.7	39.7	41.6	100.0			

CHI SQUARE = 45.02179 WITH 22 DEGREES OF FREEDOM SIGNIFICANCE = 0.0026

CRAMER'S V = 0.22734

CONFIDENCE COEFFICIENT = 0.30651

LAUNDA (ASYMPTOTIC) = 0.01149 WITH FAVACTN DEPENDENT.

LAUNDA (ASYMPTOTIC) = 0.04682

UNCERTAINTY COEFFICIENT (ASYMPTOTIC) = 0.02248 WITH FAVACTN DEPENDENT.

UNCERTAINTY COEFFICIENT (ASYMPTOTIC) = 0.03114

PEARSON'S YU B = 0.05710 SIGNIFICANCE = 0.1929

PEARSON'S YU C = 0.05457 SIGNIFICANCE = 0.1629

CROSS = 0.05429

CROSS'S D (ASYMPTOTIC) = 0.05145 WITH FAVACTN DEPENDENT.

CROSS'S D (ASYMPTOTIC) = 0.04373

CROSS'S D (ASYMPTOTIC) = 0.04223 WITH SOCIALIZ DEPENDENT.

 FAVACH FAVORITE ACTIVITY CHOSEN
 COMPELLING FOR
 RACE FAVORITE'S AGE GROUP

VALUE = 5.65 OR OLDER
 ***** PAGE 2 OF 2

SOCIALIZ

	COMMIT		ROA FOR INFO		FROTH		TOTAL	
	COL FOR	PLANT	INFO	PLANT	INFO	PLANT	INFO	PLANT
FAVACH	1.1	2.1	3.1					
GOLF	1.1	2.1	10.1	13				
	7.7	15.0	10.7					
	6.3	6.1	10.2					
	0.0	1.7	0.3					
CAMPING	1.1	2.1	5.1	7				
	14.3	10.3	21.0	5.0				
	6.3	3.0	0.9					
	0.0	0.0	0.1					
EXTRACTIVE	1.1	2.1	4.1	8				
	37.5	12.5	50.0	6.6				
	10.0	3.0	5.6					
	2.5	0.0	3.3					
OTHER	1.1	2.1	3.1	7				
	14.3	40.9	42.9	5.0				
	6.3	9.1	4.2					
	0.0	2.5	2.5					
COLUMNS	16	33	72	121				
TOTAL	13.2	27.3	59.5	100.0				

CHI SQUARE = 10.08257 WITH 20 DEGREES OF FREEDOM SIGNIFICANCE = 0.5020

CRAIGER'S V = 0.27335

CONTINGENCY COEFFICIENT = 0.34057

LAINDA (ASYMPTIC) = 0.0 WITH FAVACH DEFICIENT.

LAINDA (ASYMPTIC) = 0.01439

UNCERTAINTY COEFFICIENT (ASYMPTIC) = 0.03335 WITH FAVACH DEFICIENT.

UNCERTAINTY COEFFICIENT (ASYMPTIC) = 0.04677

PEARSON'S TAU B = -0.02210 SIGNIFICANCE = 0.3729

PEARSON'S TAU C = -0.02430 SIGNIFICANCE = 0.3729

SPUR'S D = -0.01370

SPUR'S D (ASYMPTIC) = -0.02370 WITH FAVACH DEFICIENT.

SPUR'S D (ASYMPTIC) = -0.02261

ETA = 0.07057 WITH FAVACH DEFICIENT.

PEARSON'S R = -0.05127 SIGNIFICANCE = 0.0003

NUMBER OF MISSING OBSERVATIONS = 43

[illegible]

Table A11

Activity Preferences and Age (Socialization: Important)

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12/16/61

AGE5 FINAL DATA SET

FILE AGE1 (CUTPOINT) DATE = 12/16/61

***** 1 2 0 5 5 1 A B U L A T I O N O F *****
 FAVORITE ACTIVITY SUBTYPE *****
 CONTROLLED FOR: *****
 SOCIALIZ. SOCIALIZATION IMPORTANT *****
 VALUE = 3. HIGHEST *****
 PAGE 1 OF 2

PAGE		AGE													TOTAL
COUNT		1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL		1	2	3	4	5	6	7	8	9	10	11	12	13	
FAVORITE		1	2	3	4	5	6	7	8	9	10	11	12	13	
CREATIVE CULTURE		1	2	3	4	5	6	7	8	9	10	11	12	13	
SOCIAL		1	2	3	4	5	6	7	8	9	10	11	12	13	
PASSIVE		1	2	3	4	5	6	7	8	9	10	11	12	13	
EXERCISE		1	2	3	4	5	6	7	8	9	10	11	12	13	
TEAM SPORT		1	2	3	4	5	6	7	8	9	10	11	12	13	
SELF-MOTIVATED		1	2	3	4	5	6	7	8	9	10	11	12	13	
UNSPECIFIED OTHER		1	2	3	4	5	6	7	8	9	10	11	12	13	
TOTAL		1	2	3	4	5	6	7	8	9	10	11	12	13	

POOR

QUALITY

ORIGINAL

